Table of Contents

Economic Services
The Conference Board of Canada
255 Smyth Road, Ottawa, ON K1H 8M7 Canada
Tel: (613) 526-3280 Fax: (613) 526-4857

1 Introduction

The implementation of Nunavut is not only a chance to attempt self-government, but an opportunity to develop an economy more attuned to Inuit values and resources, and perhaps show the rest of the world what sustainable development really means.[1]

1.1 Background

On April 1 1999, the map of Canada changed with the formal establishment of Nunavut. Nunavut, "our land" in Inuktitut, is the realisation of more than 30 years of negotiations and planning by the Inuit of the Eastern and Central Arctic (See Map of Nunavut at the end of this chapter). The 1993 Nunavut Land Claims Agreement included a political accord that provided for the establishment of the new Territory of Nunavut and through this, a form of self-government. The Inuit, who represent 85 per cent of the population in the Territory, chose to pursue their aspirations to self-determination through a public government structure that represents all citizens of Nunavut, Inuit and non-Inuit alike.

The new Government of Nunavut has devoted much of its first several months to getting established and setting priorities. The Government and other key stakeholders are interested in developing a sustainable economic strategy that will advance the socio-economic development of its people. The key issue, therefore, is what direction should the economic strategy follow?

It has been made clear to the Conference Board of Canada that for many Nunavummiut[2] an economic strategy must take into account several important considerations. First, the economic strategy must make full recognition of Nunavut's "mixed" economy; that is, the strong presence of both the wage economy and land-based economic activity (see box for definition of land-based economy). For example, the harvesting of country foods (e.g., caribou, arctic char, narwhal) remains a significant part of the Inuit way of life, especially from a social and cultural perspective. Given its important role, Nunavut officials believe that the land-based economy requires greater recognition beginning with more accurate measurement of its size and contribution to the whole economy.

Second, an economic strategy for Nunavut must follow the principles of sustainable development. Natural resources must be used wisely, and the economic benefits of their use shared equitably. Participation in both wage and land-based economic activities depends on responsible environmental stewardship to ensure sustainability.

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[1] Heather Myers, "Options for appropriate development in Nunavut communities," *Etudes/Inuit/Studies*, 2000, 24(1), pp. 25-40.

[2] Nunavummiut refers to any Inuit or non-Inuit citizen of Nunavut.

What is "Land-Based Economy"

Finding an acceptable term to describe the non-wage economy or subsistence economy is by no means an easy task. Some prefer using the term "informal economy" or "traditional way" to describe the non-wage economy while others feel these terms have negative connotations. The Conference Board of Canada has chosen to use the term "land-based" economy for this report. The "land-based "economy refers to all economic activity that is non-wage based. For example, hunting, fishing and trapping activities used for household use, or for barter would be considered land-based economic activity. The recorded selling of sealskins or fish for processing, although tied to the land, would not be considered land-based economic activity for the purposes of this report when these activities involve an income of some sort and are recorded as economic activities in standard Statistics Canada indicators. While a large portion of land-based economic activity pertains to hunting and fishing, it can also include the making of clothes and crafts that are not sold as well as informal child care services. Our rationale for identifying and defining land-based activity as such is that a considerable amount of economic activity in Nunavut is non-wage based and is therefore not picked up by regular economic recording measurement systems. Taken together, Nunavut's land-based economy and its wage economy are referred to as a "mixed economy." For the purposes of this report, the term "mixed economy" does not refer to the matter of public/private ownership.

Third, the strategy must make full use of the extensive body of Inuit knowledge (Inuit Qaujimajatuqangit, or IQ) and the contribution it can make toward sustainable socio-economic development policy for Nunavut (IQ is outlined in section 4.4.4).

Fourth, the economic strategy must strive toward benefiting all communities in Nunavut. The sharing of wealth among all 25 incorporated communities has been identified as an important priority beginning with the decentralisation of government operations across the Territory.

Fifth, there is a desire for Nunavut's economic strategy to foster greater self-reliance. This involves increasing participation in the economy by Nunavummiut and by ensuring southern labour and expertise do not compromise the goal of self-reliance in Nunavut.

Finally, Nunavut's economic strategy must take into account the needs of a very young population. The Territory features Canada's youngest population with 60 per cent of its population below the age of 25 years. It will no doubt have to focus on ensuring the right economic and social environments are in place to develop this emerging young population and help them realise their goals and aspirations.

At the same time, building an economic strategy for Nunavut will have to take into account several economic challenges beginning with the Territory's relatively small population of less than 30,000 and its small economy. Many of Nunavut's communities were not established around centres of wage-based employment (e.g., a mine or fishing plant), and as a result have had difficulties developing an economic base to generate jobs in the new and emerging market economy. As part of the Northwest Territories (NWT), Nunavut represented approximately 39 per cent of the population in 1996, but contributed only 16 per cent of NWT's total income. Further, the lack of economic diversification and the heavy reliance on natural resources makes Nunavut's economy much more sensitive to the world's changing demand for these commodities than the

economies of most jurisdictions in the south. Finally, only nine per cent of the Government of Nunavut's revenues come from sources other than federal transfers. This means the Government's program spending is closely related to the amount and rate of growth of the federal transfers Nunavut receives. Increases in these transfers are linked to increases in population levels and the level of provincial spending.

Nunavut must also contend with enormous infrastructure challenges. Unlike all other jurisdictions in Canada, Nunavut does not have any road infrastructure linking it to markets elsewhere and the shipping season is limited. Basic infrastructure, such as housing and waste management, particularly to accommodate large growth in population, is also limited. The shortage of housing has both social and economic consequences, and the need to address this issue has been identified by all leaders as a priority.

Finally, in terms of human resources, Nunavut has a small population of skilled workers for the wage economy. Of particular concern for the future is the number of people with low levels of formal education (e.g., high school diploma). The level of formal education has been increasing in Nunavut and the situation has been improving; however, it still ranks low compared to populations in other jurisdictions. There is also the need to ensure that knowledge and skills required for land-based activity are maintained.

The challenge for Nunavut, therefore, is to develop a sustainable economic strategy that both supports and builds on the existence of the land-based economy, and provides an increase in opportunities for those wishing to participate in the wage economy in, or close to, their communities. This is to be achieved as the population grows and an increasing number of Nunavummiut enter into the mixed economy.

A "sustainable" economic strategy will also require citizen support. Thus, setting an economic strategy for Nunavut will be influenced by the values of its residents and their notion of a high quality of life. What makes for a high quality of life for Nunavummiut? What kind of balance do Nunavummiut want to have between the land-based economy and the wage economy? What choices and tradeoffs are residents prepared to accept? The answers to these types of questions will ultimately affect how Nunavut's mixed economy develops.

1.2 Purpose of the Study

The Conference Board of Canada was contracted to conduct a study on the current status of Nunavut's mixed economy (both the land-based economy and the wage economy) and assess its longer-term prospects, including the identification of opportunities for new and emerging industries. The study was to concentrate on structural issues that underlie economic performance over the long term. In addition, the study would identify gaps in data for monitoring socio-economic performance.

This project was funded by:

- The Government of Nunavut's Department of Sustainable Development (DSD);
- Nunavut Tunngavik Incorporated (NTI); and
- Indian and Northern Affairs Canada (INAC).

The project was overseen by a working committee comprised of representatives from these sponsoring organisations.

This report is an essential piece to be used toward the development of a new economic strategy for Nunavut that will reflect the distinctive nature of its economy and respond to its special challenges. This economic strategy must also be consistent with the principles of sustainable development, particularly that people and the environment must be at the centre of thinking about the economy.

The report is to be used by a wide range of interested parties, including federal, territorial, and municipal governments, Inuit organisations, the private sector and the public.

1.3 Layout of the Report

This report is presented in seven chapters, including this introduction. Chapter 2 outlines the general approach used for this report, which is extremely important given the various approaches and biases that can be involved when examining economic development.

Chapter 3 provides an overview of economic development theory and concepts, including four factors required to create wealth and sustain an economy in the 21st century, as well as issues for consideration in developing economies. This chapter is intended to increase the reader's understanding of the basic concepts of economic development to assist with their review of the subsequent chapters in this report.

Chapter 4 provides an overview of Nunavut organised under the four factors of wealth creation (physical capital or infrastructure, human capital, natural capital, and social and organisational capital). Where possible, this chapter will include a review of key social indicators comparing Nunavut with Canada and three other jurisdictions: Yukon, Northwest Territories and Greenland.

Chapter 5 provides an overview of Nunavut's "mixed" or "whole" economy: land-based economic activity (non-wage) and the wage economy relying on the latest data available. This chapter also reviews Nunavut's wage economy by individual sectors using standard industrial categories.

Chapter 6 provides a 20-year economic outlook for Nunavut. It begins with a discussion on the prospects for the national economy and world trends. The Nunavut economic outlook is largely restricted to growth in the wage economy due to the absence of data for the land-based economy.

Chapter 7 puts all of this information and findings into context with key issues that need to be considered. This includes a discussion on values and how they have and will continue to shape Nunavut's socio-economic development.

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2 General Approach

There can be a tendency to restrict an economic outlook for a jurisdiction to some bottom line figures such as projected growth in Gross Domestic Product (GDP), changes in the unemployment or participation rates, and the size of its natural resource potential (e.g., mineral deposits). But such an approach ignores the economic activity occurring outside of the wage economy in the Nunavut society. It also provides little understanding of the factors involved in economic growth such as physical capital (i.e., infrastructure) and human capital (e.g., the skills and health of the population), and how this may affect future socio-economic development.

Over the past several years, the Conference Board of Canada has been assessing Canada's socio-economic performance and potential based on recognition that economic and social policies go hand in hand. In our first *Performance and Potential* report in 1996, we took the position that a *"high and sustainable quality of life"* was the objective of our society and that economic and social policy, together, contributed to reaching this goal.[3] Without "healthy" communities and healthy, skilled citizens, a jurisdiction's economic growth would be limited. Similarly, without a solid economic base, it would not be possible to financially sustain health and social programs that are important to its citizens.

A healthy environment (or natural capital) is also an important component of a high and sustainable quality of life. In its *Performance and Potential 2000* report, the Conference Board of Canada noted that "there is evidence that good performance on the environment is a proxy for good performance in non-environmental areas."[4] Economic, social and environmental policies are recognised as the essential elements of sustainable development.

The Conference Board of Canada has also recognised the importance of values in making policy choices. How we define "high and sustainable quality of life" and the policies chosen to achieve it will be influenced by our values. For example, some societies may value a strong collective approach for citizens to achieve their goals while other societies may value a more individualist approach.

In light of these factors, the approach used for this economic outlook is a holistic one that involves four essential features. First, an overview of economic development theory is provided to assist the reader in reviewing this report and to participate in subsequent

[3] The Conference Board of Canada's *Performance and Potential* report is released each year and provides an overall assessment of Canada's social and economic performance. This includes a comparison of Canada with six other industrialised countries. See http://www.conferenceboard.ca/pubs/ for more information on this report.

[4] The Conference Board of Canada, *Performance and Potential 2000* (Ottawa: The Conference Board of Canada, 2000), p. 73.

discussion. This overview outlines the theory, principles, and factors required to create wealth and sustain an economy in the 21st century.

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Second, our approach gives serious consideration to Nunavut's "mixed" or "whole" economy. Thus, we examine economic indicators associated with its wage economy and also the size and extent of the land-based or informal economy. As Ross and Usher point out:

> *To central authorities, planners and economists, the informal economy, consisting as it does of many small autonomous units, is largely invisible and therefore unquantified and unrecorded.*[5]

Given its importance in Nunavut, the land-based economy has been integrated into our analysis wherever possible.

Third, this outlook includes a review of the four factors or inputs contributing to economic development (e.g., physical capital, human capital, natural capital, and social and organisational capital). This includes a discussion on the state of physical infrastructure and health and social indicators. Unfortunately, data on Nunavut are limited in some areas. Further, being a new territory and having a small population, it is difficult to obtain data specific to Nunavut for some social indicators. In some cases, the available data pre-dates the formation of Nunavut and is included with the Northwest Territories.

Wherever possible, these indicators have been compared with Canada as well as three other jurisdictions: Yukon, the Northwest Territories and Greenland. These three were chosen given that they share similar characteristics in terms of population, geography and demographics.

The fourth distinctive feature of the approach used in this report involves a discussion of the role of values in making policy choices to map an acceptable course for economic development in Nunavut. A review of Nunavut's short history shows that values have already played a role in making policy choices related to economic development in the Territory thus far (e.g., decentralisation of government to spread wealth and opportunity).

2.1 Project Methodology

The project sponsors requested that this research project be based largely on secondary sources due to time constraints and as part of an effort to provide analysis of all of the data that have already been collected to date on Nunavut's economy. Consistent with this requirement and the approach outlined above, the following project activities were undertaken to produce the outlook:

- An inception meeting held on site with members of the project working committee.
- A literature review involving key reports and documents related to Nunavut's socio-economic development.

[5] David P. Ross and Peter J. Usher, *From the Roots Up: Economic Development as if Community Mattered* (Croton-on-Hudson, New York: The Bootstrap Press, 1986).

- On site interviews and phone interviews by Conference Board of Canada (CBoC) staff with key stakeholders identified by the project sponsors.
- A review of socio-economic indicators ranging from traditional economic measures such as per capita GDP and unemployment rates, to social indicators such as levels of education.
- A review of international trends and forecasts for the national and world economies.
- A 20-year outlook for the Nunavut economy, drawing on both the national and provincial long-term models and forecasts. This forecast comes out of the Provincial Forecasting Model (PMTFM), which is a large-scale quarterly econometric model developed and maintained by The Conference Board of Canada.
- A sectoral analysis of Nunavut's wage economy based on several sources but using the Standard Industrial Classification (SIC) definitions from the National Accounts
- An analysis of several relevant databases (with the assistance of Nunavummit Kiglisiniartiit (Nunavut Bureau of Statistics)) including the 1999 Nunavut Community Labour Force Survey.

As requested, this Nunavut Economic Outlook is non-policy prescriptive, that is, no specific policy recommendations are made. Nevertheless, the report is intended to serve as an important element in a future economic strategy for Nunavut that gives proper consideration to all of the factors behind socio-economic development.

3 Processes of Economic Development

Key Highlights:

- Economics is not simply about money, rather it considers how people allocate their time and resources to achieve personal and societal objectives.
- Wealth creation requires four key ingredients: physical capital, human capital, natural capital, and social and organisational capital.
- Economic growth is required for a society to achieve its development objectives (meeting the basic needs for the sustenance of life, achieving self-esteem, and gaining freedom of choice)
- The traditional land-based economy cannot, on its own, keep pace with the increasing demands for goods and services produced in the industrial economy.

This chapter presents a brief overview of the ingredients and conditions required for economic development in any jurisdiction. It is intended to help guide the analysis of Nunavut's economy and its prospects discussed in the chapters that follow.

3.1 Why Talk About "Development"?

As discussed in the approach taken for this report, an assessment of a region's economy encompasses more than simply attempting to measure the level of production and consumption of goods and services. Rather, the entire breadth of human activities undertaken to achieve wellbeing is open to economic assessment. Economics is not simply about money, rather it considers how people allocate their time and resources to achieve personal and societal objectives. The prospects for a region's economic development, then, are an analysis of the prospects for achieving these objectives.

The development of a regional economy implies progress in the achievement of three fundamental economic objectives:[6]

1. *Life-sustenance*: Do people have adequate food and shelter, are they secure from violence, are they in good health?
2. *Self-esteem*[7]: Do people have positive images of themselves and their relationships with each other.

[6] Adapted from Michael P. Todaro, *Economic Development in the Third World*, 4th Edition (White Plains, NY: Longman, 1989).

[7] Some factors that influence self-esteem include the degree of economic inequity (relative poverty and the ability to keep up with our neighbours) and social inequity related to the ability of individuals to play productive roles in the society. Cultural development plays a clear role in the development of group self-esteem.

3. *Freedom of choice*[8]: Has the range of choice available to individuals and groups within a region been expanded or reduced?

3.2 Four Ingredients for Development

Achieving the three development goals identified above requires a certain level of material well-being, as well as physical, cultural, mental and spiritual well-being. Economic development tends to focus on the creation of material wealth as the foundation for general well-being. Wealth creation requires four key ingredients:

1. *Physical capital*: Refers to the infrastructure needed to support economic production—transportation infrastructure, structures and equipment required for business and industrial purposes, communications systems and so on. Housing stocks, recreational facilities, hospitals and other elements that contribute to human capital are also relevant, as are investments that serve to reduce draw-down from the stock of natural capital such as pollution-reduction systems.
2. *Human capital*: This encompasses human labour, but extends beyond this to include a society's level of literacy, education and skills status, and knowledge. Health status and general well-being come into consideration, as do attributes such as personal motivation, discipline, and values.
3. *Natural capital*: The *raw materials* required for economic activity, such as land, wildlife, fibre, minerals, energy and so on. Also, the *services provided by the environment*, such as waste management (storage of greenhouse gas emissions, biological treatment of waste water and so on). Finally, "*natural knowledge*" or the knowledge maintained within biological systems, such as chemical configurations of plant proteins that serve as maps for the production of pharmaceutical drugs, as well as ecological relationships that have evolved to support life in harsh regions.
4. *Social and organisational capital*: Encompasses the environment in which natural, human and physical capital interact to create wealth. For example, conditions of prolonged societal conflict and wars can lead to dramatic reduction in the productive outputs of existing human, natural and physical capital. Lack of entrepreneurial organisation into appropriate business structures may similarly impede the achievement of the potential that would be otherwise predicted. Also, do the environment and structures in place support innovation whereby additional economic value is extracted from knowledge? This form of capital includes the major players involved with wealth creation (e.g., government, private sector, non-governmental organisations), policy environments, levels of trust between players, and public security.

[8] For example, to what extent has development decreased or increased dependence on external factors, and reduced or increased servitude to other people and institutions? Economic development must not only increase the range of material goods and services an individual can consume, but it must increase the range of options available to people.

Of course, these factors can be affected by external conditions and the levels of capital in the economies of trading partners. For example, trade barriers, war or a sharp rise in world oil prices can affect the development of capital in all economies.

3.3 Processes and Pre-conditions for Economic Development

If physical capital, human capital, natural capital, and social and organisational capital are the key ingredients that underlie wealth creation, what are the processes that actually lead to economic development? Two approaches of interest to developing economies such as Nunavut are discussed here: increasing growth through investment in physical capital; and shifting from land-based to industrial economy through structural change.[9]

3.3.1 Increasing Stock of Physical Capital

Under the classical approach to economic development, economic growth can be achieved by a nation or region increasing its *stock of physical capital*, or the physical assets that are required to produce other goods and services.[10] However, while savings and investment in productive capital may be a necessary precondition for economic growth, it is not by itself sufficient. Other elements must be in place to assure that the new capital does indeed lead to higher levels of economic production. Some of the preconditions for development that are commonly identified include:

- *appropriate structural attributes*, such as well-integrated commodity and money markets, highly developed transport facilities, and a well-educated and trained labour force;
- *favourable institutional factors* such as efficient government bureaucracy and policy environments; and,
- *social attitudes* conducive to development, such as discipline, deferred gratification (e.g., education) and the motivation to succeed.

All four ingredients for wealth creation must work in balance if investment in physical infrastructure is to be productive. As an example, building a new tourist hotel is an investment in a region's physical capital stock. However, if the hotel is downwind from a noxious landfill (poor natural capital), if there are no means to bring tourists into the region (inadequate transportation infrastructure), if there is no one with the skills or

[9] Please note that the discussion in this section is of a theoretical nature and is not intended to serve as an actual assessment of any particular jurisdiction.

[10] This can be done by saving a portion of total production for re-investment in the creation of more physical capital. In order to afford this investment, regions may be required to reduce current expenditures in areas such as consumer goods and social programs. Increased capital investment may also be achieved through transfers of capital from other regions or jurisdictions. Reliance on such transfers, however, tends to increase vulnerability to external forces and reduces the range of options available to local development policy-makers.

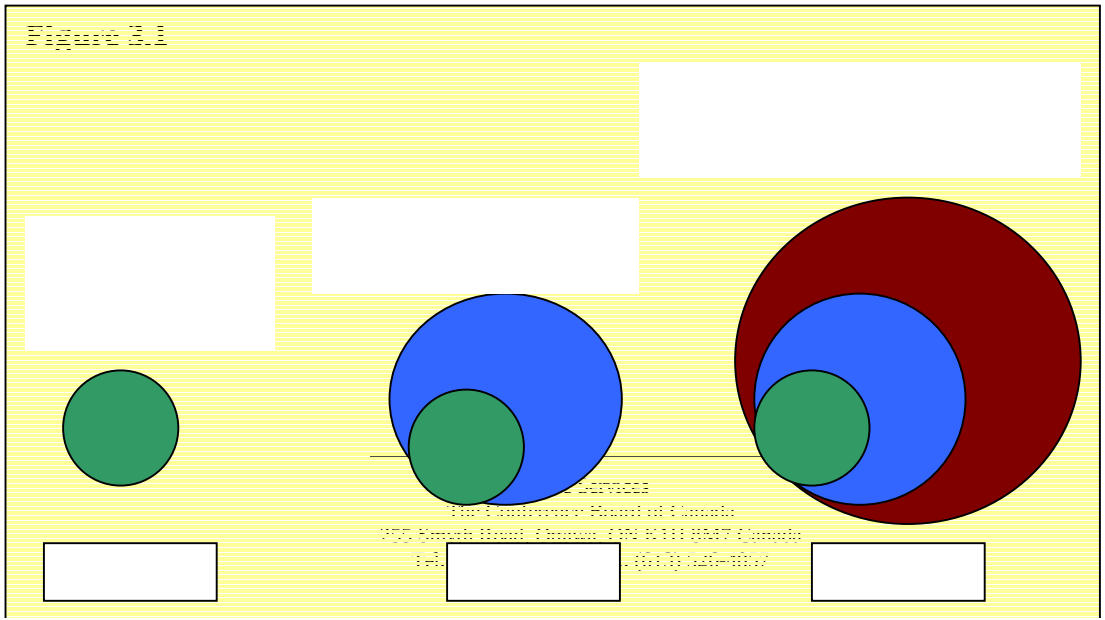
willingness to manage it (inadequate human capital), or if there are no businesses able to attract visitors to the hotel (organisational capital lacking), the investment is not likely to be productive.

3.3.2 Focusing on Structural Changes

The second approach for development focuses on *structural changes* that tend to occur as a region undergoes economic growth. Observation of development in regions around the world suggests that as economic production increases, the contribution of the traditional land-based subsistence sector declines relative to urban industrial production. Under this approach, the engine of economic growth shifts from traditional subsistence production to urban-based industrial production, and on to knowledge-based or "experience-based" economies (Figure 3.1). This shift is necessary in order to increase per capita wealth, as the potential for growth or expansion within the traditional land-based sector is low compared to growth potential of industrial production.

It is worth emphasising that while the relative importance of industrial production or "new economy" production increases during the transition from land-based production, the absolute level of production of the land-based economy can remain constant or even increase. Similarly, as the contribution of the "new economy" to national wealth increases, there is little indication that industrial production will decline in absolute terms. Rather, increased wealth from the "new economy" places greater demand on industrial production as demand for consumer products increase.

This focus on the structural changes that often occur during the development process can help in understanding major shifts in population distribution and in economic activities. As investment is made in the physical capital of a land-based economy, individual productivity increases. For example, mechanisation of rural Canadian farms has dramatically increased the ability of individual farmers to produce food. However, this has tended to create surplus labour, since natural limits to production exist in land-based economies. The result is that people have moved from rural areas toward



opportunities in the urban industrial economy.

The rate of transition from a solely land-based subsistence economy to a more mixed economy depends upon factors such as:

- the abundance of natural resources;
- government policy and social objectives;
- the availability of external capital and technology; and
- the environment for external trade.

The implicit assumption in this process for development is that with the appropriate mix of internal policy and external development assistance, regions can manage the pace of structural transition in order to achieve higher levels of economic wealth, while meeting social or political objectives.

3.4 Sustainable Development

The processes of development outlined above are all premised on the assumption that economic growth is required for a society to achieve its development objectives (meeting the basic needs for the sustenance of life, achieving self-esteem, and gaining freedom of choice). Concerns are raised, however, about whether such growth is sustainable over long periods of time.

One way of assessing the sustainability of growth is to consider the full impacts of growth on all four factors of wealth production. In the case of physical capital stocks presented above, conditions for economic growth are established when expansion of physical capital stocks takes place. This expansion occurs when an economy's consumption is less than total production, leading to savings to be, in theory, invested into capital.

To address sustainability here requires a consideration of savings and investment to apply to all four of the factors of wealth creation. This is essentially what "full cost accounting" attempts to do. When expansion of physical capital comes at the cost of present day or future environmental impacts, then the erosion of natural capital may erase the bottom-line value of the apparent savings. Similarly, an increase in the labour force (human capital) that comes at the cost of family well-being (social capital) may result in no net savings to be applied toward expanding productive potential.

Following this argument, the United Nations has suggested that sustainability can be achieved "in the context of 'genuine savings' — when the per capita consumption of a society, fully accounted for, is less than the total per capita output of the society, fully accounted for."[11] Here, "consumption" and "output" includes natural and environmental goods and services, as well as human, social and cultural factors. It is a

[11] As quoted in the Conference Board's *Performance and Potential 2000* report, p. 11.

challenge of sustainable development to integrate the value of these non-monetary factors into all levels of political and commercial decision-making. Considerable efforts are currently underway in Canada and in other jurisdictions to identify measurable indicators that can be used to assess the state of these factors.[12]

3.5 The Role of Land-Based Economic Activity

This brief sketch of economic development processes and the factors of wealth creation sets the stage for considering the role of the land-based economy in economic development. Two issues will need to be addressed:

1. Why economic growth is necessary; and
2. The role of the land-based economy in development.

3.5.1 Why Growth is Necessary

Land-based economies have been proven by indigenous societies around the world to be sustainable over many generations. Why then should economic growth be needed now to achieve development goals?

Sustainability in the past was premised on natural and cultural mechanisms that successfully served to limit the level of production demanded from the land. Population growth was limited to the carrying capacity of the environment, while levels of individual consumption were kept in check through cultural and social pressures.

Communications and transportation technologies have largely overtaken these control mechanisms. The ability to transport food to areas of need has supported population increases by smoothing over natural fluctuations thereby reducing episodes of famine, while mass communication is supporting the development of a consumer culture.[13]

Increased capital investment in the modern land-based economy for goods and services such as housing, hunting and domestic equipment, and communications networks has had two important results. First it has increased individual productivity, providing people with time to do other things and creating surplus labour. Secondly, it has led to

[12] For example, the Bellagio Principles for Assessing Progress Toward Sustainability, identified a range of generic text criteria for sustainability. These principles call for holistic thinking, considering the full range of both positive and negative implications of an activity over multiple time horizons, addressing issues of equity and disparity both within present-day populations, and between generations, along with a range of other dimensions. The Bellagio Principles are fully presented by Peter Hardi and Terrence Zdan in a 1997 paper, "*Assessing Sustainable Development: Principles in Practice*" available at the International Institute for Sustainable Development web site: http://iisd.ca/measure/1.htm

[13] In many traditional land-based societies, consumption tends to be based on survival needs, while in modern consumer society the utility of a product is assessed in much broader terms that can, perhaps be best termed "wants." Consumption based on need is limited, while the limits to wants-based consumption may approach boundlessness.

a need to generate cash, since these capital items are all acquired through cash transactions with the industrial economy.

Therefore, in regions where the land-based economy is active, requirements for cash mean that commercialisation of land-based activities, wage employment, and subsidisation become important, leading people to become involved in a mix of formal (cash-based) and informal (not involving cash transactions) economic activities.

The need for cash to purchase goods and services in the industrial economy, however, is not the only driver behind economic growth demands. The ability to become a productive member of society is an important aspect in the development of self-esteem and the achievement of well-being. As a population increases, the availability of productive roles must also increase.

In regions where there is growing demand for goods and services arising from a growing population or from increasing levels of individual consumption, economic growth will be necessary in order to achieve the goals of development.

3.5.2 The Land-Based Economy's Role in Development

Land-based economies are based on natural processes that place inherent limits on levels of production and, therefore, on the potential for economic growth. There are only so many fish in the sea or caribou on the land. The traditional land-based economy cannot, on its own, keep pace with the increasing demands for goods and services produced in the industrial economy.

As outlined with the process involving increasing physical capital stock, economic growth is achieved through investment in physical capital and transition into industrial and "new economy" sectors. While land-based production continues (refer to Fig. 3.1), the number of people involved in these activities declines as individual productivity increases. In many instances this has led to movement of the resulting "surplus labour" off the land and into urban areas where opportunities in the industrial and "new economy" sectors are more abundant. As a result, the need for local goods and services is reduced, families of people who provided these services move out and communities enter into a spiral of decline. This is not just a theoretical possibility, as many from the agricultural heartland regions of Canada know well.

However, the outlook for land-based economies is not necessarily so bleak. First, not all societal decisions are made on the basis of economic optimisation. Attachment to land and to community is a strong attribute fundamental to many societies. Individuals may be willing to sacrifice some material aspects of well-being in order to achieve other goods, such as personal freedom, or cultural maintenance. Urban economies may themselves be willing to pay the costs of maintaining social diversity, recognising it as a

good in itself.[14] Values play a role in making these policy choices (discussed in Chapter 7).

For these and other reasons, economically marginal communities may be expected to continue to exist. Land-based economic development efforts, therefore, should aim to improve the well-being of individuals living in these communities while reducing their vulnerability to external events by decreasing reliance on transfers from more productive regions. These efforts may assist such communities to become more economically viable, if never entirely self-sustaining.

A second reason for upgrading the outlook for land-based economies is that these economies have demonstrated considerable capacity to adapt and evolve. By building on all four ingredients for wealth creation, new economic niches may be created within the land-based economy. Transition away from "traditional" economies might occur, however such transitions may not inevitably lead to the urban-based industrial economic model. For example, there is considerable interest in the potential of the "new economy" for converting traditional land-based knowledge, such as IQ in the case of Nunavut, and activities into goods and services that can be sold in the formal economy.[15] Experience-based tourism and knowledge-based, value added marketing of speciality products are just two examples.

Traditional land-based economic activity can play a key role in maintaining and strengthening three key ingredients for wealth creation — natural capital, human capital and social capital. In doing so it can help to build the foundation for future economic growth.

For example, social sharing and trust that have arisen from many land-based economies could serve as important counter-points to the individualism that is developing in highly formalised industrial economies. While the value of *social capital* has not been well-integrated into models of economic development, efforts to account for the full cost of economic activity being undertaken under the banner of sustainable development may be expected to make progress in this area. Links between social capital, patterns of consumption and natural capital may be expected to emerge from this avenue of investigation.

Land-based economic activity can also increase *natural capital* through applying traditional knowledge to environmental monitoring—current efforts to utilise traditional knowledge of the land as a means to assess global climate change, for example—or to resource management. Land-based knowledge of natural systems can

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[14]The value of diverse human knowledge systems and ways of life may change over time. As with biological diversity and genetic diversity, lifestyle diversity may prove critical at some future point in human development. Maintenance of a diversity of economic strategies—land-based ones included—may have inherent, though presently unknown, value.

[15] See, for example, Michael Robinson and Elmer Ghostkeeper, "Native and local economics: a consideration of economic evolution and the next economy," *Arctic* 40 (2) (1987), pp. 138-144.

also lead to new applications for natural resources, such as that demonstrated by the development of natural plant medicines.

On a very immediate basis, the land-based economy offers a critical avenue for people, especially youth, to gain self-esteem by entering into productive roles in society. This can provide significant development of the *human capital* available for future economic activities.

How these stocks in social, natural and human capital are converted into economic production—and what investments in physical capital will most effectively complement this process—is the challenge confronted by land-based community economic developers and government decision-makers.

In summary, the outlook for land-based economies depends to a large extent on their current development status and the stocks of each of the four sources of wealth. If basic human needs are currently being met, development and investment efforts can be turned toward capitalising on existing sources of wealth. Such a process will demand: good organisational support systems; healthy people with high self-esteem and personal motivation; strong social motivation and trust; adequate infrastructure; and a natural environment that provides the needed environmental support.

4 Where We Stand Today: Overview of Nunavut

Key Highlights:

- The state of Nunavut's infrastructure or physical capital is a serious problem that is affecting both economic and social development. Key areas requiring attention include: a shortage of housing and business space; the need to upgrade sewage and waste management systems; the lack of affordable transportation and telecommunications networks; and limited child care services.
- Nunavut has the fastest growing population in Canada with a growth rate of more than three times the national average. Nunavut has Canada's youngest population with 60 per cent of its population below the age of 25 years and 41 per cent below the age of 16 years.
- Great strides need to be made in regards to Nunavut's human capital. Education levels among Nunavummiut are improving but are still low compared to people in other parts of Canada. Average income per family is lower in Nunavut than in the other northern territories and the rest of Canada. The health status of Nunavummiut is much lower than that of other Canadians.
- There is a need to gain a better understanding of the state of Nunavut's natural capital. This includes addressing the significant lack of public geoscience data on Nunavut and to have ongoing mechanisms to measure and monitor the environment and natural resources.
- The Nunavut Land Claims Agreement has a profound role in organising capital in Nunavut for economic development purposes. The Agreement includes numerous provisions for economic development such as: representative hiring of Inuit in the government sector; preferential procurement policies by the federal and territorial governments for Inuit firms; a requirement for an Inuit Impact and Benefit Agreement for major development projects; and greater control over natural resources and the right to harvest.
- Government (both federal and territorial) and Inuit organisations play a large role in supporting economic development opportunities in Nunavut. Inuit Qaujimajatuqangit, involving Inuit knowledge and way of thinking, is expected to play an influential role in decision making related to wealth creation in Nunavut.

With 23 per cent of Canada's landmass and two-thirds of Canada's coastline, Nunavut is of immense size. There are 25 incorporated communities in Nunavut ranging from 130 persons in Grise Fiord on Ellesmere Island to approximately 5,000 in Iqaluit on Baffin Island. All but one community (Baker Lake) is located on the sea and there are no roads linking any of the communities (with the exception of a road linking the community of Arctic Bay and the Nanisivik mine in northern Baffin).

Many of Nunavut's communities are relatively new as permanent settlements. Some were established around an industry (e.g., Iqaluit or Rankin Inlet), while others were established primarily for administrative purposes (i.e., to dispense health care, education and other government services) and to assert Canadian sovereignty. It has been documented that the establishment of permanent communities has had a profound effect on many aspects of the Inuit way of life including changes in hunting practices and greater reliance on the wage economy.[16]

As outlined earlier, The Conference Board of Canada believes it is important for Nunavut's economic strategy to consider all four factors for wealth creation: physical capital, human capital, natural capital, and social and organisational capital. This chapter provides an initial overview of each one as it applies to Nunavut, drawing on some key highlights that will require attention. This information is useful when examining Nunavut's economy and potential areas for growth in Chapters 5 and 6.

4.1 Physical Capital/Infrastructure

As identified in Chapter 3, one of the key requirements for economic growth is physical capital or infrastructure. Transportation links, housing and electricity, schools, and public health requirements (i.e., access to clean water, sewage management and waste management) all make a contribution to economic growth.

This section provides a brief overview of Nunavut's physical capital. It is not an exhaustive assessment but is intended to highlight the contribution of sound infrastructure to economic and social development. The essential issue is whether Nunavut's physical capital is adequate to support economic growth or if deficiencies exist that are preventing growth and harming the other three factors of wealth creation.

A review of the existing literature and discussions with key informants strongly suggests that the state of infrastructure in Nunavut is a serious problem that is affecting both economic and social development. A key consideration is how Nunavut's infrastructure will need to be upgraded to accommodate population growth stemming from a large young population and a growing number of elderly persons. Unlike many southern communities, there is little ability to finance necessary upgrades through a local tax base.

Outlined below are some of the key infrastructure areas that have been most frequently identified as requiring attention.

4.1.1 Housing

The need to address the serious shortage of housing throughout the Territory has been identified as a top priority by the Government of Nunavut. Many of the health, social and economic issues in the Territory seem linked to this problem. For example, we

[16]George Wenzel, "Inuit sealing and subsistence managing after the E.U. sealskin ban," *Geographische Zeitschrift*, 32:2, pp. 130-42.

heard anecdotal reports of families sleeping in shifts because there is insufficient room for all members to sleep at once. The lack of sleep has in turn affected employee absenteeism and children's performance at school. Crowded housing conditions and design imperfections of existing housing have contributed to health problems such as respiratory difficulties and the spread of communicable diseases. The shortage has also affected the economy by making it difficult to recruit employees. Quite often a job without available housing is a job unfilled. At the same time, an individual may be reluctant to change employers if it means losing their home. The Government of Nunavut's decentralisation plans have created an additional need for housing in the smaller communities.

Nunavut's housing concerns are linked to the high cost of serviced land and in building, maintaining and operating homes. Most building materials must be shipped in from the south at a cost of up to $35,000. As a result, public and government housing play a large role in Nunavut. There are 3,579 public housing households in Nunavut, housing 13,666 people or over half the population (98 per cent of tenants in public housing are Inuit). The biggest obstacle to public housing is the operating costs (approximately $91 million per year) such as utilities.

The average public housing tenant who is employed pays approximately 20 per cent of their gross monthly household income towards rent. However, most tenants are unemployed or have little income. These tenants, over 60 per cent, have their rent subsidised by approximately $1,625 per month and only pay $32 per month. The subsidy, which is essentially hidden from the tenant, is estimated at $45 million per year.[17]

The rent-scale system creates a disincentive to employment. Having a job can result in a substantial increase in rent. People would rather ensure they have subsidised housing than work for $12 an hour.[18] The system also limits any hope of developing alternative housing options.

There are approximately 1,100 families or 4,000 people (15% of population) on the waiting list for immediate demand for public housing. According to Nunavut housing officials, the demand for public housing will also increase due to more and more people wanting to live in their own house and not with their extended family. Although the number of households with 6 or more persons declined from 32 per cent in 1986 to 22 per cent in 1996, the number of persons per dwelling is still higher for Nunavut (3.84 persons per dwelling) compared to the Canadian rate (2.65).[19] Given this trend and the growing proportion of young people between the ages of 14 and 18, demand for

[17]Government of Nunavut, *A Commitment to New Organisational Values*, Final Report of the Nunavut Housing Task Force, 2000.

[18]Iqaluit Community Economic Development Study, 2000.

[19]Nunavut Housing Corporation, *Business Plan 2001-2002*

housing is expected to increase by about 260 homes per year over the next 5 years.[20] Of course, accompanying the general lack of housing is the growing need for housing for special needs populations such as seniors and the disabled.

Funding from the Government of Nunavut was provided to build 100 public housing units across the Territory in 2000 at a cost of $15 million—the first public housing units built since 1993. The Government of Nunavut is calling for the building of a further 3,200 to 3,500 units over the next 5 years at a cost of $100 million a year to meet the housing demand.[21]

Under a block funding arrangement, the Canada Mortgage and Housing Corporation (CMHC) provides approximately $58 million per year in funding to the Government of Nunavut for social housing. However, this funding decreases beginning in 2005 and ends entirely by 2037. It is not clear what further role, if any, the federal government will play in the area of housing.

Nevertheless, housing is a priority for the Government of Nunavut. It is its second largest capital budget item in 2000-2001. But it does not appear that the Government can address the housing issue in a sustainable manner on its own. Clearly, innovative models will be required to address this issue on a sustainable basis.

4.1.2 Commercial Space

A number of key informants identified a lack of commercial space in many communities. Few commercial buildings exist. Starting home-based businesses, a growing trend in southern communities, can be difficult in Nunavut as they are not permitted in public housing units for a variety of reasons (e.g., increased utility use). Other problems such as overcrowding and poor Internet access can make it difficult to work at home as well.

Frequent calls have been made for more multi-service centres whereby a variety of services occupy a common building. These types of arrangements usually require innovative funding mechanisms to pay for the construction and maintenance of the space.

4.1.3 Water/Sewage Treatment/Waste Management

The importance of basic local services such as access to clean water and proper sewage and waste management systems cannot be overlooked. In fact, the development of these services has been commonly identified as having made the most significant

[20]Nunavut Housing Corporation, *Business Plan 2001-2002*.

[21]That being said, it is interesting to note that over 60 per cent of Inuit reported housing to be adequate or very adequate (Nunavut Bureau of Statistics, 'Nunavut add-on' to the 1999 Labour Force Survey). The discrepancy between the expert opinion and survey results may be due to a high tolerance for poor housing conditions among Inuit and cultural differences between Inuit and non-Inuit towards housing.

contribution towards improving human health. Therefore, it is important to ensure that Nunavummiut are well served in these areas.

While an assessment of water and waste management systems was not undertaken as part of this study, media reports and discussions with Nunavut officials strongly suggest that there are concerns particularly with sewage and waste management systems in some communities. Waste management or garbage disposal was reported to be one of Nunavut's most severe infrastructure problems. In most cases, landfill sites are not feasible and open surface burning is conducted.

Iqaluit, in particular, faces numerous problems as the municipal infrastructure must keep up with a growing population. Iqaluit officials, for example, have identified a need for over $18 million to address basic infrastructure requirements. A new sewage treatment plant that will mechanically and biologically treat sewage will provide some assistance. A key issue is whether essential infrastructure will be able to meet the needs of a growing population and any future economic development opportunities such as tourism.

4.1.4 Transportation (ports, airstrips, roads, shipping)

Transportation infrastructure in Nunavut is very limited with respect to roads, air, and sea. In this regard, Nunavut is much different from Yukon and NWT. For example, there are 4,681 kilometres of road in Yukon compared to only one inter-community road of approximately 20 kilometres in Nunavut. And unlike the NWT, there are no winter roads with the exception of the road from the NWT to the Lupin Mine just inside the western Nunavut border. The Government of Nunavut has expressed interest in the concept of building some new all weather routes in Nunavut (e.g., between the Kivalliq region and Manitoba).[22] But the fact remains that Nunavut's geography (e.g., many island communities) and relatively small isolated populations are major obstacles to further road development.

There is an absence of marine infrastructure (e.g., harbours and ports) in Nunavut—a surprise given the location of Nunavut's communities and the heavy reliance on the summer sea-lift for its supplies. Obviously, communities have managed without this infrastructure thus far, but consideration will need to be given to developing a marine infrastructure if it is preventing or limiting economic development opportunities such as fishing and tourism.

The very limited road and marine networks place enormous reliance on air links. However, the cost of air travel is very high. For example, the average return flight from Iqaluit to Ottawa costs over $2000, which is a major problem for the development of the tourism industry in Nunavut. Air links between Nunavut's communities vary in service along with the quality of airstrips.

[22]Government of Nunavut, *Transportation Strategy*, 2001. Iqaluit. An inventory of transportation infrastructure in the Territory was commissioned as part of the transportation strategy.

The Government of Nunavut recognises the lack of transportation infrastructure in the Territory and has developed a transportation strategy (through the Department of Community Government and Transportation). Part of this strategy outlines a vision for transportation links that will include a commitment to improve links between communities within Nunavut (particularly to support government decentralisation). [23]

4.1.5 Telecommunications/Connectivity

In planning the administration for the new Territory, The Nunavut Implementation Commission identified the need to have highly developed information and communications technology systems.[24] This is particularly important given the Government of Nunavut's decentralisation plans, and the need to better link the numerous communities scattered across such a vast territory. Enhanced connectivity can also play an important role in socio-economic development such as by improving access to information and services (e.g., telehealth), increasing distance education opportunities, and supporting marketing opportunities and the growth of e–commerce opportunities (e.g., planning and reserving of vacations via the Internet, purchasing of crafts).

But the development of telecommunications in Nunavut has been limited to date. From a technical standpoint, telecommunications in the North must rely on costly satellite technology. Unlike Yukon and NWT, ground-based systems such as fibre optics cable and microwave are not feasible. Using satellite technology requires a satellite(s), ground stations, and bandwidth (or satellite space) all of which are costly to operate, particularly the latter. Access to the Internet has been much more difficult in the North due to the lack of Internet Service Providers (ISPs) and the cost of satellite space.

Phone service in Nunavut has not been at the level of service available to southern communities (e.g., high rates and less use of single line service). The small population size means that the costs for upgrading services cannot be absorbed entirely by customers. The Canadian Radio-television and Telecommunications Commission (CRTC) approved a plan to reduce long-distance rates and improve phone service beginning January 1, 2001.[25] The plan is intended to introduce greater competition in long-distance service and to facilitate greater access to ISPs.

Decisions will have to be made as to the level of Internet and network services desired since increasing satellite use is very costly. But it seems clear that the idea of Nunavut

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[23]The Municipality of Iqaluit, Submission to House of Commons Finance Committee, August 31, 2000.

[24]See for example, *Footprints in New Snow.* A Comprehensive Report from the Nunavut Implementation Commission to the Department of Indian Affairs and Northern Development, Government of Northwest Territories and Nunavut Tunngavik Inc. Concerning the Establishment of the Government of Nunavut. Iqaluit, NU, March 1995.

[25]Canadian Radio-television and Telecommunications Commission, "CRTC approves plan to reduce long distance rates and improve phone service for Northwestel customers," News Release, November 30, 2000.

being a leader in the use of information technology and telecommunications to offset its geographical challenges is not realistic unless the high cost of satellite space can be addressed. Nevertheless, it will still be important for Nunavummiut (including businesses and government) to receive appropriate and reasonable levels of access to Internet-related services. This includes ensuring that the Government's decentralisation model can be adequately supported with information technologies.

Officials from the Government of Nunavut are working with the recently established National Broadband Task Force. The Task Force has been mandated to map out a strategy and advise the federal government on best approaches to make high-speed broadband Internet services available to businesses and residents in all Canadian communities by the year 2004. Their work will include examining strategies to address inequities in accessing high-speed broadband services between urban and rural/remote communities.

4.1.6 Child Care/Schools:

There has been considerable research in recent years on health outcomes for children and factors influencing children's health and development. The results consistently indicate that the first six years of life are the most important in the physiological (e.g., brain development) and social development of humans. Key contributors to these early years include adequate income, access to child development programs (e.g., structured child care, family resource centres), positive parenting practices, and supportive communities.

As a result, researchers and policy makers are calling for programs and services that can improve early childhood development, of which access to high quality child care services is an important component. The issue of lack of quality child care services is a frequently identified problem in Nunavut[26] and can affect economic development in two key ways. First, it can serve as a disincentive for those wishing to participate in the wage-based economy, particularly for women or for those who are willing to move to another community to work. On a longer-term basis, the absence of child care and other early childhood development services may hinder the development of young Nunavummiut as they move through school.

The availability of schools is another important element of physical capital. An issue in Nunavut for some years has been simply a lack of availability of secondary schooling in some communities. For example, in 1990-91, there were only four communities in the Nunavut area where a grade 12 program was available. This problem has been largely addressed. By 2000-01, students in 22 of 26 communities could access secondary education within their community. But as pointed out by the Council of Ministers of Education in Canada, "the size of schools and the areas served have an impact on the costs of education delivery as well as the extent to which specialised instruction and

[26]Iqaluit Community Economic Development Study: Balanced Development, 2000.

services can be offered."[27] Spending on education in NWT/Nunavut was more than double per person than the Canadian average over the past decade despite reductions in federal transfers during the mid-1990s.[28]

Many key informants cited a problem with the "quality" of education available in Nunavut. The majority of teachers are highly dedicated, although often less educated than their southern counterparts.[29] There is also a lack of teachers who can teach in Inuktitut—only 35 per cent of teachers in Nunavut were Inuit in 1996-97.[30] Department of Education officials point out that the availability of educational services has been improving. For example, a growing number of Inuit have been taking up the teaching profession. Increasing the number of Nunavummiut educators will be necessary to meet the demand for teaching in Inuktitut (including familiarity with Inuit culture and values) and as the supply of teachers from elsewhere in Canada decreases due to an expected teaching shortage in the years to come.[31]

While there is no university in Nunavut, Nunavut Arctic College provides a considerable range of post-secondary training and courses in a number of communities including adult education courses. In 1998, more than 2,500 of Nunavut's 25,000 residents attended courses—10 per cent more than the year before.

4.1.7 Health and Social Services

The Baffin Regional Health Centre, constructed over 40 years ago, is the Territory's only hospital (34 beds). All other communities in Nunavut have a health centre that provides nursing services. Residents of the Kivalliq and Kitikmeot regions do not have a hospital and must therefore travel out of the region to receive hospital care. All three regions in Nunavut have a relationship with a southern medical centre (e.g., Kitikmeot with Edmonton).

Human resources are an important component of the health care system. Very few communities in Nunavut have resident physicians. Continuity of care is very difficult with high turnover and substitution of medical personnel. The 1994-95 National Population Health Survey found that 75 per cent of Nunavut males did not visit a family physician in the past 12 months compared to 50 per cent in NWT and 28 per cent for the country as a whole. With respect to nursing, there is a critical shortage of nurses in Nunavut that will likely grow due to the increasing shortage of nurses across Canada. Furthermore, there are no Inuit nurses working in Nunavut. This makes it difficult in providing culturally and linguistically appropriate care.

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[27]Council of Education Ministers, Canada, *Education Indicators in Canada 1999*, (CEMC, 2000) http://www.cmec.ca/stats/pceip/1999pdf/, p. 27.

[28]Ibid., p. 55.

[29]Nunavut Department of Education, *Ajunngittutit!* Iqaluit, September 2000.

[30]GNWT, Towards Excellence: A Report on Education in the NWT,1996-1997. Yellownife, 1997.

[31]Council of Education Ministers, Canada, *Education Indicators in Canada 1999*, (CEMC, 2000), p. 25.

Telehealth is seen as a strategy for addressing the shortage in health human resources and increasing access to medical expertise for patients by transmitting medical images and information between two centres. Some telehealth applications are in place and the Government of Nunavut has recently received funding from Health Canada to expand telehealth services to all communities in Nunavut. Communities can also use the telehealth technology for other purposes such as education via videoconferencing.

There has been growing recognition over the past 25 years about the need to place less attention on treatment and more attention on promoting health and preventing illness. The World Health Organisation and the World Bank have recommended that nations, particularly those with small budgets, direct spending toward illness prevention and health promotion related services that can benefit many people over the long term as opposed to funding expensive specialised treatment that benefit few. Similarly, many health care workers in Nunavut identify the lack of health promotion and illness prevention strategies as the highest priority. Resources for mental health-related services, such as counselling, have been identified as a particular priority.[32]

The provision of health services has important implications for Nunavummiut and their Government. Health care has tended to consume the largest part of provincial and territorial government budgets given its high level of support among Canadians. As such, it can often "crowd out" other important priorities like education or economic development. For example, 62 per cent of provincial government's new program spending between 1998 and 2000 was budgeted for health care.[33] Enormous efforts have been made by governments to improve control over escalating health-care costs. The Government of Nunavut will likely face similar pressures.

4.2 Human Capital

As identified in Chapter 3, human capital is an important factor for economic growth. Recognition of the importance of human capital and strategies on how to enhance it, such as through early childhood development and lifelong learning, are receiving attention world-wide.

In order to meet Nunavut's ambitious socio-economic goals, its population will need to be "healthy, wealthy and wise." A review of some key social indicators reveals that great strides need to be made in several areas.

4.2.1 Demographics

[32]Linda Archibald and Roda Grey, *Evaluation of Models of Health Care Delivery in Inuit Regions*, Inuit (Ottawa: Tapirisat of Canada, September 8, 2000).

[33]The Conference Board of Canada, *Performance and Potential 2000*.

[34]James Franklin and Nunavut Environmental Ltd., An Assessment of the Present State of the Public Geoscience Database in Nunavut (Iqaluit, October, 1998).

Statistics Canada figures show Nunavut's population at the time of its formation in 1999 was approximately 27,000. Unlike Yukon and NWT, a large proportion of the population does not reside in a single community (see Table 1). The City of Iqaluit, the capital of Nunavut, is the largest community with a population of 5,000. Rankin Inlet is the second largest community with a population of approximately 2,200. Eight other communities have populations over 1,000 people including Cambridge Bay. Approximately half of the population resides in the Baffin region, with roughly 30 per cent residing in the Keewatin or Kivalliq region and 20 per cent residing in the Kitikmeot region.

Inuit represent approximately 85 per cent of the population, but for communities other than Iqaluit, Rankin Inlet and Cambridge Bay the percentage of Inuit is closer to 95 per cent. As such, the percentage of aboriginal peoples is higher in Nunavut than in Yukon (21 per cent), NWT (48 per cent) and Greenland (80 per cent). According to the 1996 Census, Inuktitut is the dominant language in Nunavut with 60 per cent speaking it at home compared with 35 per cent speaking English.

Table 2

Nunavut: The Fountain of Youth

Table 1

Population Comparisons

(number of residents)

	Total	Capital City	% of Total in Capital
Nunavut	27,000	5,000	18.5
NWT	40,000	17,000	42.5
Yukon	31,000	23,000	74.2
Greenland	56,000	13,000	23.2

Source: Statistics Canada

	Nunavut	Canada
Below the age of 25 years	60	38
Below the age of 15 years	41	20
Over 65	3	12

Source: Nunavummit Kiglisiniartiit (Nunavut Bureau of Statistics)

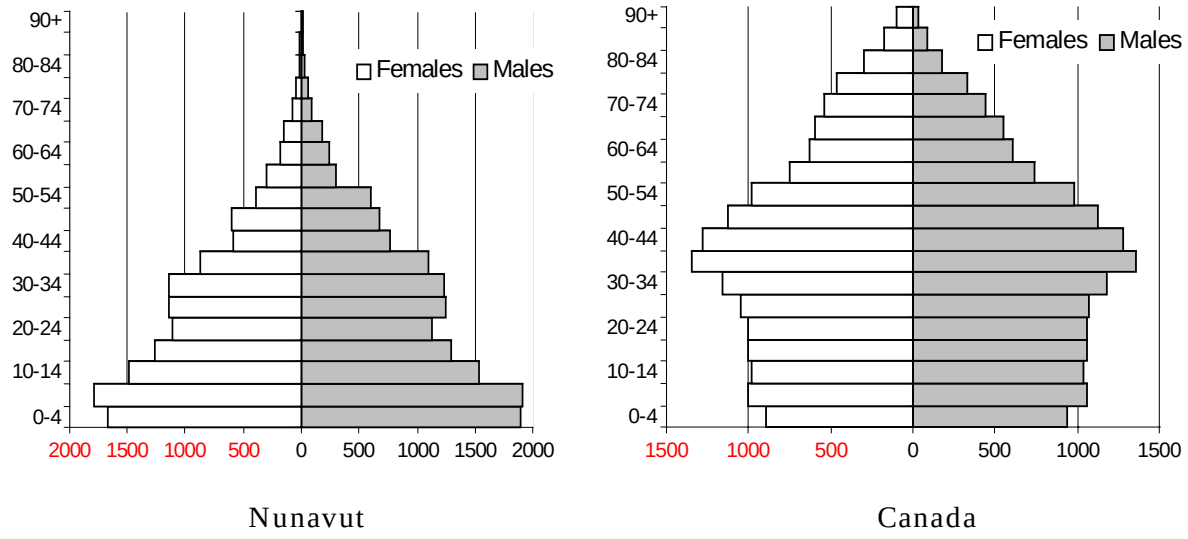
There are some important aspects about Nunavut's population that distinguish it from the population of other jurisdictions in Canada, and which will have implications for Nunavut's economic development. The first aspect pertains to the Territory's rapid growth in population over the past several decades. For example, Nunavut experienced an increase in population by 32 per cent between 1986 and 1996. Most of this growth is due to natural increase as high birth rates were accompanied with increased life expectancy rates due in part to improvements in health related services.[35] Nunavut's population growth rate (16.4 per cent) was more than three times the national average (5.7 per cent) between 1991 and 1996. Nunavut's population is expected to reach over 32,000 by 2006 and over 43,000 by 2020 according to Nunavummit Kiglisiniartiit (Nunavut Bureau of Statistics). *By 2010 it is expected that there will be more people residing in Nunavut than in Yukon.* However, it should be noted that Nunavut's population growth rate growth has been slowing, as has its fertility rate due to Inuit women having fewer children.

The high population growth rate over the past several years has resulted in Nunavut having the youngest population in Canada (Table 2). Approximately 60 per cent of the

[35]Jack Hicks and Graham White, "Nunavut: Inuit Self-Determination Through a Land Claim and Public Government?" *Nunavut: Inuit Regain Control of Their Lands and Their Lives* ed. J Dahl, J. Hicks and P. Jull (Copenhagen, Denmark: International Work Group for Indigenous Affairs, 2000), pp. 34-35.

Chart 1

Population Pyramids: Nunavut and Canada, 1999
(Nunavut in number of people, Canada in thousands of people)



Source: Statistics Canada

population are under 25 years of age—92 per cent of whom are Inuit—and 41 per cent of the population are under 16 years. So, unlike most of Canada (see Chart 1), Nunavut has a very large segment of the population that is quite young and that will likely dominate public policy in Nunavut for years to come (e.g., the need for increased demand for educational related services, youth employment opportunities).[36] The non-Inuit population in Nunavut is distributed similar to the overall Canadian distribution with the majority being between the ages of 25 and 60 years.

4.2.2 Education and Skills Development

Level of education is obviously an important component of human capital that has much to say about the "potential" of the population. The Government of Nunavut has identified education and training as a high priority.

A review of education-related statistics suggests that while Nunavummiut have had lower levels of formal education than residents of other territories and provinces, the situation has been improving.

[36]Government of Northwest Territories, *Towards Excellence: A Report on Education in the NWT 1996-97*. http://siksik.learnet.ca/to_excellence/mainfram.htm

As shown in Table 3, over half of the adult population in Nunavut had less than a high school diploma in 1996.

Table 4

Participation in Senior Secondary Schooling Students Aged 15-19 Years
(per cent)

	1985	1990	1995	1997
Nunavut	47	54	73	76
NWT	56	60	82	90

Source: Student Records System, Dept. of Education, Culture and Employment, GNWT

However, the situation continues to improve. As seen in Table 4, participation in senior secondary schooling has been increasing steadily since 1985. Graduation rates have also improved. In 1987, Nunavut had 25 high school graduates (grade 12). In 1997, there were 65 graduates, and by 2000 there were 135 graduates.[37] Post-secondary education levels have also improved—between 1986 and 1996 the proportion of Nunavut adults with some post-secondary education more than doubled.[38]

Continued progress on increasing the level of formal education will be required to assist in Nunavut's socio-economic development. For example, people with Grade 12 education or better have an employment rate of 75 per cent versus only 30 per cent employment for those in Grade 8 or less. A key issue will be ensuring there are enough Inuit to lead and participate in government and the economy in the future. The Royal

Table 5

Plans after secondary school in 1996
(per cent)

	Nunavut		NWT	
	Male	Female	Male	Female
Working	44	35	27	18
Unemployed	7	6	4	5
Attending College	11	23	21	24
Attending University	23	28	33	46
Leading Traditional Lifestyle	4	0	2	0
Other Reasons	5	3	8	4

Source: Health Behaviours, Attitudes and Knowledge of Young People in the Northwest Territories, Technical Report, Department of Education, Culture and Employment, GNWT, 1996

Table 3

Level of Education of Nunavut Adults (1996)
(per cent)

	No Secondary Degree	High School Graduate	Trades Cert. or Diploma	Other non-university	University without cert. or Diploma	University Degree
Nunavut	53.1	4.0	4.5	27.1	4.4	6.8
NWT	36.4	8.5	3.6	29.5	9.3	12.6
Yukon	27.6	8.4	4.0	33.5	12.0	14.5
Canada	34.8	14.3	3.7	24.2	9.7	13.3

Source: Statistics Canada, 1996 Census

[37] These figures were provided by the Nunavut Department of Education.

[38] Hicks and White, p. 37.

Commission on Aboriginal Peoples (RCAP) noted that the low numbers of formally educated Inuit are alarming given the fact that most government jobs will require some form of post-secondary training in areas like accounting, financial management, organisational development, planning and business development.[39] Table 5 suggests that it may take time for Nunavut males to acquire these skills as only 34 per cent plan to pursue post-secondary education compared to 54 per cent of male students in NWT and 51 per cent of Nunavut females.

It is also important that Inuit have the skill set required for participation in the land-based economy. Inuit learn this skill set—navigation, safety, and land skills—from within their families and from elders. Ensuring and monitoring that young Inuit have developed these skills will obviously require different processes and measurements than "graduation levels" used for the formal education system. Nevertheless, it will be important that attention is given to this and that it be monitored on an ongoing basis.

4.2.3 Income

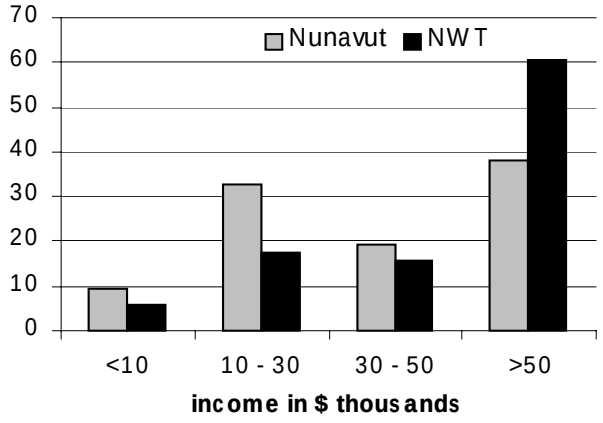
Income is an important determinant of health. There are two issues associated with income. First, are citizens of Nunavut earning / receiving adequate levels of income and second, how is income distributed among the population? As will be shown in the next chapter, Nunavummiut rely a great deal on the land-based economy to meet their needs so measuring the level of taxable income in Nunavut does not provide us with a complete picture.

Nevertheless, available data from Statistics Canada suggest many Nunavummiut are surviving on low incomes:

- Average income per person is lower in Nunavut than NWT and for Canada, which means lower purchasing power given the higher prices in Nunavut than NWT. Personal income per person in Nunavut in 1999 was $18,630 compared to $25,485 per person in Canada (discussed further in Chapter 5).
- There is a lower proportion of families earning $50,000 or more in Nunavut than in NWT (see Chart 2).
- Income distribution between regions in Nunavut is relatively similar with

Chart 2

Census Family Income Comparison, 1996
(per cent of families)



Source: Statistics Canada

[39]Canada, Final Report of the Royal Commission on Aboriginal Peoples (RCAP), Vol. 4, Chapter 6. (Ottawa: Supply and Services Canada, 1994).

slightly higher levels of income for Baffin, particularly Iqaluit.

- The percentage of lone parent families has been rising since 1981 in NWT / Nunavut. In 1981, 13 per cent of families were lone parent families. By 1996, this figure had risen to over 16 per cent while the Canadian average was approximately 14 per cent. Lone parent families headed by a female are the poorest family group in Nunavut.
- There is a high reliance on income support among the people of Nunavut. Approximately 55 per cent of Nunavummiut receive income support at some point during a given year.

It has always been difficult to obtain accurate information on levels of income and to select a "poverty level." Determining poverty levels in Nunavut may be more difficult given the reliance on the land-based economy and the sharing of assets. Nevertheless, greater effort is required in assessing income distribution for planning purposes.

4.2.4 Health status

> *Today, Inuit have the highest suicide rate, the lowest life expectancy and the highest birth rate of all Aboriginal peoples in Canada—and Aboriginal health status fall far below national standards.*[40]

The 1994-95 National Population Health Survey asked respondents to rate their own health status. Interestingly, the percentage of Nunavummiut who reported "excellent" health was similar to the national level.

However, the hard statistics suggest that there are differences in health status between Nunavummiut and the rest of the population. Table 6 provides a comparison of health indicators with the other territories and the Canadian average. Life expectancy for Nunavummiut males is approximately 7 years below the national average and almost 10 years below the national average for females. Related to this is the fact that the rate of premature death (measured in potential years of life lost) is more than double the national average. This would be due in part to the high rate of unintentional injuries (which are preventable) and infant mortality compared to the rest of the country. The rate of smoking, particularly among teens is very high and, not surprisingly, the death rate for lung cancer in Nunavut is more than double the rate for the rest of the country. A comparison report prepared by Statistics Greenland notes that life expectancy among Inuit in all circumpolar jurisdictions is similar to levels found in developing countries such as China, Brazil and Thailand.[41]

However, there are some indicators where the Territory's population fares well in comparison, particularly when it comes to diseases related to diet. For example, the death rate for Ischemic Heart Disease for Nunavummiut is much lower than the

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[40] Archibald and Grey, p. 3.

[41] Statistics Greenland, *Statistical Yearbook 1997 (* http://www.statgreen.gl/English/IndexUK.htm)

national rate. The relatively high consumption of country food by Inuit may be contributing to much lower heart disease and diabetes levels than the rest of Canada.

An alarming finding from the 1994-95 National Population Health Survey is the high level of inactivity reported by residents of Nunavut, particularly females—81 per cent indicated they were inactive compared to 62 per cent for the country.

Table 6

Health and Society Indicators

	Nunavut	NWT	Yukon	Canada
Total population	27,000	40,000	31,000	30,750,000
Aboriginal population (per cent of total population)	85	48	21	3
Life expectancy at birth, males, 1996 (years)*	68.3	74.4	72.3	75.4
Life expectancy at birth, females, 1996 (years)*	71.3	79.1	79.2	81.2
Potential years of life lost per 100,000 people, 1996 (combined rate for Nunavut and NWT)	7695	7695	4742	3804
Infant mortality rate (per 1,000 live births)*	17.9	6.7	8.7	5.8
Fertility rate (births per 1,000 women aged 15 to 49)	131.3	82.3	44.0	48.4
Low-birth weight rate (percentage of live births less than 2,500 grams)*	7.4	4.4	4.8	5.8
Unintentional injury deaths per 100,000 (injuries due to causes such as motor vehicle collisions, falls, drowning, burns and poisonings)	75.7	72.8	68.6	27.7
Suicides per 100,000 population*	68.6	12.7	23.5	12.9
Violent crimes per 100,000 population, 1996 (combined rate for Nunavut and NWT)	5032	5032	3175	973
Lung cancer (mortality rate per 100,000 population)*	131.8	66.3	73.1	49.2
Ischemic heart disease (mortality rate per 100,000 population) *	40.2	85.0	119.2	136.6
Self-assessed health status, male, 1994-95 (per cent reporting 'excellent' health)	23	28	24	27
Self-assessed health status, female, 1994-95 (per cent reporting 'excellent' health)	24	19	27**	24
Cigarette smoking, 1994-95 (per cent of population)	59	38	33**	24
Cigarette smoking, 12 to 19 year olds (per cent of population)	46	27	25**[a]	14
Physical activity index, 1994-95 (per cent of females indicating "inactive")	81	56	28	62
Percent of males that did not visit a GP in past 12 months, 1994-95	75	50	18	28

Source: CIHI, Statistics Canada (Canadian Vital Statistics Database), NWT Department of Health and Social Services, Yukon Bureau of Statistics, 1994-95 National Population Health Survey.

*These rates were created by average of three years of data (1995, 1996, 1997) over the 1996 population estimates; age-standardized to the 1991 Canadian population age structure.

** Figures taken from 1993 Yukon Health Promotion Survey

[a] 15 – 19 years of age

The rate of communicable diseases is much higher for NWT/Nunavut than the Canadian rate (e.g., the rate of measles is 36 times the national average).[42] Sexually

[42]Government of Northwest Territories, Community Economic Development Services. Environmental Scan. (http://www.gov.nt.ca/RWED/ced/env_scan/scan.html)

transmitted diseases are reported to be 15 times higher in NWT/Nunavut than the national average.[43]

Available data and anecdotal evidence appear to confirm that Nunavummiut have experienced difficulties during this period of major economic and social adjustment. Community workers frequently identified the need for mental health services. The Nunavut Brighter Futures program is aimed at addressing physical, mental, and social problems in communities. According to the 1999-2000 report, 52 per cent of the activities funded pertained to mental health.[44]

Suicide is viewed by many as Nunavut's single biggest social problem. Nunavut's suicide rate was approximately five times higher than for Canada as a whole. The incidence of suicide has been increasing in Nunavut over the past 20 years, particularly among young males and in the Baffin region.[45] For example, there were 34 reported suicides between April 1, 1999 and July 2000—a rate of more than two per month. Twenty-one of the 34 suicides occurred in the Baffin region of which almost 60 per cent were in Iqaluit.

Key informants identified family violence as a serious problem in Nunavut as well. Unfortunately, quantitative information on this matter can be difficult to collect and interpret. According to 1996 Statistics Canada figures the rate of assaults was five and half times higher in the Northwest Territories (including Nunavut) than the national rate.

Drug and alcohol consumption is also high. For example, self-reported use of drugs and the sniffing of solvents and aerosols are significantly higher among Inuit than non-Inuit

Table 7

Drug and Alcohol Behaviour in Nunavut, 1996
(per cent)

	Inuit	Non-Inuit	Canada
Consume five or more drinks when drinking	25.1	21.3	8.8
Drink at least once a week	12	34.7	34.9
Used marijuana or hash in the past 12 months	32.5	12.2	7.4
Used LSD, cocaine, or heroin in the past 12 months	6.5	2.1	1.5
Ever sniffed solvents or aerosols	25.6	2.6	0.8

Source: 1996 Drug and Alcohol Survey (www.stats.gov.nt.ca/Statinfo/Health/alcdrug/Alcohol_Drug.html)

and the Canadian population as a whole (see Table 7).

[43]Government of Northwest Territories, Department of Health and Social Services. Reported in Hicks and White, p. 89.

[44]Government of Nunavut, Department of Health and Social Services, *Nunavut Brighter Futures: 1999-2000Year-end Report*. (www. http:/ / www.gov.nu.ca)

[45]Sandy Isaacs et al., "Suicide in the Northwest Territories: A Descriptive Review", *Chronic Diseases in Canada* 19:4, 1998

There are two major implications of this lower health status among Nunavummiut. First, poorer health contributes to lower levels of human capital (i.e., fewer people working or working at full capacity), one of the factors of wealth creation. A healthy and educated workforce is required to develop and sustain an economy that can support an adequate level of public services. Second, a population with a lower health status can lead to a greater demand on publicly funded health and social services thereby increasing costs to government. Improvements in social capital take time so attention to this aspect of wealth creation should be a current priority.

4.3 Natural Capital

Natural capital is the third factor of wealth creation. It includes among many things the raw materials required for economic activity such as land, wildlife, minerals and energy. Nunavut has extensive natural capital that has been an essential element to the Inuit way of life for centuries and which has supported both harvesting and industrial development.

Knowledge of Nunavut's natural capital is an important component of any economic strategy. As noted by the Royal Commission on Aboriginal Peoples, effective participation in the mixed economy is reliant on detailed knowledge of large territories and the flora and fauna they support.[46] Generally, sound knowledge of the extent of Nunavut's natural capital (e.g., mineral deposits, fish stocks) has yet to be achieved (some discussion on potential resources is discussed in Chapter 5). Therefore, structures and processes need to be in place to assess Nunavut's natural capital.

The Nunavut Land Claims Agreement (NLCA), which is discussed in greater detail in the next section, addresses a number of areas related to natural capital such as land ownership and the creation of several public bodies to oversee environmental related matters including: the Nunavut Wildlife Management Board, the Nunavut Planning Commission, the Nunavut Impact Review Board, the Nunavut Water Board, and Surface Rights Tribunal.

As part of Article 11 of NLCA, the Nunavut Planning Commission and Indian and Northern Affairs Canada have instituted the Nunavut General Monitoring Program (NGMP). Starting with a look at the Kitikmeot region, the program will involve the collection and coordination of information related to the state of the environment (e.g., greenhouse gasses, global temperature).

4.3.1 Wildlife/Fisheries Science

The NLCA provided for one-time funding to undertake a five-year Nunavut Wildlife Harvest Study (expected to be complete by May 2001). The study will provide more information on harvesting numbers of wildlife to help establish levels of total allowable

[46]RCAP, vol.2, Ch.5, s1.2

harvest and contribute to sound management of wildlife resources. The NLCA also included a provision to conduct a study on bowhead whales (referred to in section 4.4.4). How wildlife in Nunavut will be monitored on an ongoing basis is an issue that needs to be resolved.

There is also a need for more research on fish stocks in the waters adjacent to Nunavut, particularly for turbot and shrimp. The limited research undertaken to date has proved to be beneficial. For example, scientific research on turbot in 1999 funded by the federal Department of Fisheries and Oceans and the Nunavut Wildlife Management Board has led to increased fishing allocations for Nunavut (see Section 5.3.1 for details). Current research thinking suggests that the main spawning area for turbot throughout Atlantic / Arctic Canada is the Davis Strait and in particular, the waters on the Canadian side of the Greenland / Canada boundary.

Better knowledge of the fish stocks has two important benefits. First, it can lead to the identification of new or larger fish stocks and an increase in harvesting allocations, as in the case for turbot in 2001. Second, better knowledge of fish stocks can also help improve conservation and attain a sustainable fishing industry within a precautionary framework.

4.3.2 Public Geoscience

Geoscience is an important source of knowledge about the land and its subsurface that supports many activities and industries. It represents an essential planning tool for any economic development strategy. Geoscience knowledge is the foundation upon which mineral and energy industries plan and conduct exploration. Topographic mapping is an essential piece to support the management of renewable resources and the planning of services such as tourism.

Unfortunately, a significant lack of public geoscience data exists for Nunavut on many levels:[47]

- Less than one-third of Nunavut is mapped topographically according to 1:50,000 scale (much of what does exist is out of print) and only 5 per cent of what is available has been digitised;
- Only half of Nunavut has 1:250,000 scale geological maps necessary for mineral exploration. Geophysical and geochemical mapping is also incomplete with less than 5 per cent of the Territory having geochemistry coverage; and
- There is a lack of hydrographic maps to support the development of marine resources, shipping and tourism.

This paucity of public mapping is unique to Nunavut. Yukon, by comparison, has a well developed public geoscience database.

[47]James Franklin and Nuanvut Environmental Ltd.

The benefits of addressing these information gaps are clear. From a scientific point of view, it will improve our knowledge base and understanding of Nunavut's natural resources and how they can be conserved. From an economic development perspective, the knowledge can support the development of a number of industrial sectors such as mining, fishing and tourism. Better knowledge on what mineral potential exists will allow the Government of Nunavut or other organisations to make a case for investment or financial support. As such, it represents an important public investment.

Natural capital is vital to a sustainable development approach for both the land-based and wage economies as well as Nunavummiut's overall way of life. Environmental warming, hazardous waste dumps, and contaminated natural resources are of concern to Nunavummiut.[48] Sound knowledge of Nunavut's natural capital is required that builds on and integrates Inuit Qaujimajatuqangit (IQ). Appropriate data on many aspects of Nunavut's natural capital is now being collected, but this will need to be enriched and undertaken on an ongoing basis particularly to allow Nunavut to play a significant role in monitoring climate change.

4.4 Social and Organisational Capital

The final factor of wealth creation identified in Chapter 3 is social and organisational capital, that is, how a jurisdiction is organised, particularly within the context of the three other factors of wealth creation (physical, human, and natural capital). This section examines how Nunavut is organised for wealth creation, beginning with the important Nunavut Land Claims Agreement and ending with an overview of the major actors involved in creating wealth in Nunavut.

4.4.1 The Nunavut Land Claims Agreement (NLCA)

It is important to recognise that the creation of Nunavut is seen by its leaders as a necessary condition for fulfilling ambitious socio-economic goals that allows for a blending of the Inuit way of life with the ways of life associated with the wage economy:

> *Indeed, Nunavut was and is used by Inuit leaders as a kind of shorthand—a word not only to express their political aspirations and demands for a settlement of their land claim, but a concept that implies a new and enduring relationship between Inuit and the Canadian state. Above all, Nunavut came to be seen as the means to chart the path to the future—the means of blending the best of the old with the best of the new.*[49]

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[48]In one community, Qikiqtarjuaq, over 60 per cent of Inuit children under the age of 15 and almost 40 per cent of Inuit women of childbearing age were found to have PCB body burdens exceeding Health Canada's "tolerable" guidelines. Health Canada, *A Second Diagnostic on the Health of First Nations and Inuit People in Canada*, November 1999.

[49]Terry Fenge, "Political development and environmental management in Northern Canada: The case of the Nunavut Agreement", *Etude/Inuit/Studies*, 1992, 16 (1-2), pp. 115-141

The creation of Nunavut Territory arose from several factors but certainly the drive toward the Nunavut Land Claims Agreement was key and remains a central organising piece to future economic development opportunities (see box for dates of important milestones).

The 1993 Nunavut Land Claims Agreement (NLCA) contains 42 articles overseeing the rules of ownership and control over the land and resources of Nunavut. The objectives of the Agreement are as follows:

- to provide for certainty and clarity of rights to ownership and use of lands and resources, and of rights for Inuit to participate in decision-making concerning the use, management and conservation of land, water and resources, including the offshore;
- to provide Inuit with wildlife harvesting rights and rights to participate in decision-making concerning wildlife harvesting;
- to provide Inuit with financial compensation and means of participating in economic opportunities; and
- to encourage self-reliance and the cultural and social well-being of Inuit.[50]

The Agreement covers a wide range of issues pertaining to the socio-economic development of the Territory and its people such as:

- a commitment to sign a political accord to establish Nunavut Territory;
- capital transfer payments of $1.148 billion to be paid over 14 years and to be administered by the Nunavut Trust on behalf of Nunavut Tunngavik Inc. (NTI). The payments are not paid to individuals but are for the collective benefit of all Nunavut Inuit;
- title to 350,000 square kilometres of land, nearly 10 per cent (35,200 square kilometres) of which includes mineral rights and a share of royalties from oil, gas, and minerals;
- a commitment to attain a representative level of Inuit employment in Government (territorial, municipal and the federal public service in Nunavut for which the Treasury Board is the employer) that reflects the ratio of Inuit to the total population in Nunavut (Article 23);
- a commitment to provide preferential procurement policies for Inuit firms in respect to all federal and territorial government contracts in Nunavut (Article 24); and requirements that Inuit firms be given preferred consideration in contracts in regards to the operation of national and territorial parks (Article 8.4.8);

[50]Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada, Indian and Northern Affairs Canada and Tungavik, 1993.

- a requirement for an Inuit Impact and Benefit Agreement for any major development project (e.g., water exploitation project, land resource exploitation, project in excess of $35 million) that covers such matters as Inuit hiring and training, access to airfields and roads, and business opportunities for Inuit;
- representational rights on separate management boards (institutions of public government) for land, water, wildlife, environment and resource development that will work alongside the Government of Nunavut;
- the establishment of three new federally-funded national parks;
- priority for Inuit to set up sport and commercial wildlife ventures;
- the right to harvest marine and territorial wildlife throughout Nunavut sufficient to meet consumption needs; and
- special consideration in the allocation of fishing licences in Hudson Bay and Davis Strait adjacent to, though outside, Nunavut's boundaries.[51]

This is by no means an exhaustive list as there are many other provisions in the Agreement related to economic development as well. For example, Inuit are entitled to 50 cubic yards of carving stone from Crown land per person per year.

Articles 23 and 24 are two areas in particular of the NLCA that can significantly affect economic development. Given Nunavut's high reliance on government jobs, the commitment to achieve representative employment by Inuit in all three levels of government in Nunavut can have enormous implications. Further, the commitment under Article 24 to assist Inuit firms to compete for government contracts provides potential for economic development within the Territory. The requirement for Inuit Impact and Benefit Agreements for any major development project, such as for minerals, oil and gas, will alter how such projects are organised and run in the future, a marked contrast with past development practice.

The capital transfer payments are solely for the use of Inuit organisations and not to be utilised in government functions. Some of this funding has been used for economic development purposes such as the recent formation of the Atuqtuarvik Corporation and financial support for Inuit hunters. But there is nothing in the NLCA that requires the earnings from the capital payments to be used for government services. This does bring up an issue as to the role of government and Inuit organisations in advancing the socio-economic development of Nunavut.

The NLCA differs from some of the other larger land claims agreements such as the James Bay and Northern Quebec Agreement that emphasised the creation of a single, large corporation to pursue economic development opportunities. It also differs by

[51]William Hamley, "The Nunavut settlement: A critical appraisal," *International Journal of Canadians Studies*, Vol. 12, Fall, 1995.

virtue of having the agreement tied to a political accord governing the territory involved.

4.4.2 Establishment of Nunavut Territory

Nunavut has a very important distinction from Yukon and Northwest Territories: Nunavut is founded on a single land claims agreement that essentially covers the entire Territory. However, like Yukon and Northwest Territories, the Government of Nunavut is a public government for all residents, both Inuit and non-Inuit alike. Given this public government approach, Nunavut Tunngavik Incorporated (formerly Tunngavik Federation of Nunavut) is responsible for administering the Land Claims Agreement on behalf of the Inuit population (and not the Government of Nunavut), while goals have been set to ensure the Government of Nunavut is reflective of the large Inuit population that it serves.

Establishment of Nunavut: Key Milestones

1976	Inuit Tapirisat of Canada (ITC) proposes the creation of a Nunavut Territory as part of a comprehensive land claims settlement in the Northwest Territories with the Inuit people.
1980	Delegates at the annual general meeting of ITC unanimously pass a resolution calling for the creation of Nunavut.
	Legislative Assembly of NWT votes in favour of dividing the territory.
1990	The Tungavik Federation of Nunavut (established to negotiate the land claims agreement on behalf of the Inuit), the federal government and the Government of NWT sign an agreement in principle for a Nunavut land claim.
1992	Tungavik Federation of Nunavut and government representatives sign the Nunavut Political Accord, committing to the establishment of the Territory of Nunavut as of April 1, 1999.
	The Inuit of Nunavut vote to accept the Nunavut Land Claims Agreement.
1993	The Nunavut Land Claims Agreement is signed.
	The *Nunavut Land Claims Agreement Act* and the *Nunavut Act* are adopted by Parliament of Canada.
1994	The Nunavut Implementation Commission is established to advise on implementation of the new territory (e.g., organisation and design of government).
1995	Iqaluit is selected as capital of Nunavut via public vote.
1999	Nunavut comes into being (April 1).

Source: Adapted from Jack Hicks and Graham White, "Nunavut: Inuit self-determination through a land claim and public government?" in Jens Dahl, Jack Hicks and Peter Jull (eds.), *Nunavut: Inuit Regain Control of Their Lands and Their Lives.* (Copenhagen, Denmark: International Work Group For Indigenous Affairs, 2000), pp. 94-96.

It is important to recognise that the development of Nunavut is very much tied to the notion of a three-way partnership: the Inuit People (represented by Nunavut Tunngavik Incorporated (NTI)), the Government of Nunavut and the Government of Canada (through Indian and Northern Affairs Canada).[52] How the partnership functions and the roles of each member still need to be clarified as the partnership evolves. However, the partnership is certainly unique: no where else in Canada does a public government share exactly the same boundary with a single aboriginal organisation. In 1999, NTI and the Government of Nunavut signed the Clyde River Protocol in 1999 creating a cooperative framework between these two organisations as they each undertake their responsibilities. Under the Protocol, for example, Nunavut Inuit and the public government cooperated in drafting the new Nunavut business incentive policy (Nunavummi Nangminiqaqtunik Ikajuuti (NNI)) and Nunavut's new education act.

4.4.3 Establishment of the Government of Nunavut

The *Nunavut Act*, passed in 1993, was an extension of the NLCA and was the legislative framework for creating Nunavut. The Act also created the Nunavut Implementation Commission in 1994, which made recommendations regarding the implementation of the new Government of Nunavut. The Commission produced several reports used in the development of two comprehensive reports: *Footprints in New Snow* (1995) and *Footprints II* (1996). The reports made several recommendations related to governance and administration of Nunavut including a timetable for elections, a new legislative assembly and a process to establish a territorial capital.[53]

The shape and form of the government was seen by Nunavut leaders as a key step in the Territory's development:

> *Government will represent an important—and necessary—first step in allowing Inuit and other residents to take control of their own lives and futures, to generate their own opportunities, calculate their own trade-offs, and make their own choices.*[54]

A key recommendation of the Commission and consistent with the Nunavut Political Accord, was that the Government of Nunavut should be decentralised as much as practicable, "with conscious efforts made to distribute government functions and activities across the regions and communities of Nunavut and conscious efforts made to delegate as much authority as possible to Government of Nunavut officials working at the territorial and community levels."[55] As the Territory's largest employer, a

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[52]This report is an example of this partnership.

[53]Nunavut's first election took place on February 15, 1999.

[54]Mary Simon, Address prepared for Queen's University Convocation, October 1994 in *Footsteps in New Snow*, p.13.

[55]*Footprints in New Snow*. A Comprehensive Report from the Nunavut Implementation Commission to the Department of Indian Affairs and Northern Development, Government of Northwest Territories and

decentralised government would ensure that economic opportunities are shared as widely as possible. The sharing of government jobs among all communities in Nunavut is a very important and sensitive matter for most Nunavummiut (Chapter 7 discusses this further).[56]

Decentralisation also places government employment closer to citizens in a wider range of communities which can encourage local Inuit to participate in the Nunavut public service. It has also been suggested that a decentralised approach is more consistent with traditional Inuit political culture.[57] Accordingly, government departmental units are located in ten communities covering all three regions in Nunavut. In addition, the level of focus for economic development strategies has been at the community level rather than at the territorial level or individual level. As identified in the Royal Commission on Aboriginal Peoples, this is a consistent approach recommended for economic development in aboriginal communities.

The establishment of the Government of Nunavut and other public organisations has been the focus of energy and attention for many in Nunavut over the past few years. It was not until 1998 that the Government of Nunavut's top senior public servants (deputy ministers) were selected. Only then could much of the implementation of the new government begin including the hiring of approximately 2,700 public servants with 1,800 employees transferred over from the Government of Northwest Territories. The Commission set a goal of having a minimum of 50 per cent Inuit in the Government of Nunavut headquarters by 1999 and full representative Inuit participation by 2021. As of April 1 2000, 44 per cent of the Government of Nunavut's workforce were Inuit.

In 1999, the Government of Nunavut released the Bathurst Mandate, its five-year plan and priorities along with the principles to guide its implementation. Four themes were identified:

1. Healthy Communities;
2. Simplicity and Unity;
3. Self-Reliance; and
4. Continuing Learning.[58]

Nunavut Tunngavik Inc. Concerning the Establishment of the Government of Nunavut. Iqaluit, NU, March 1995, p. 57.

[56]For example, the Nunavut Association of Municipalities, Resolution #00-01on non-infrastructure Communities Economic Activity: "that the Government of Nunavut develop a plan to ensure that the 15 smaller Nunavut communities are treated fairly and that they receive their fair share of both Capital and O & M funding."

[57]Hicks and White, p. 66.

[58]Government of Nunavut, *The Bathurst Mandate Pinasuaqtavut: That Which We've Set Out To Do.* 1999. http://www.gov.nu.ca/eng/Bathurst/GNPolicies.htm

Among these broad themes, training and learning for a Nunavut-based workforce and housing have been identified as the Government's highest priorities. The Government's largest spending priorities based on its 2001-2002 budget are as follows:

- Education (includes income support): 26%
- Health and Social Services: 18%
- Public works: 14%
- Community Government and Transportation: 12%
- Nunavut Housing Corporation: 8%

4.4.4 Role of Inuit Qaujimajatuqangit (IQ)

Inuit Qaujimajatuqangit, or IQ for short, has played an important role in guiding the creation and distribution of wealth in Nunavut, particularly for the land-based economy but increasingly for the wage economy. IQ is literally translated as "that which are long known by Inuit," and is a philosophy or a way of living and thinking that encompasses a range of elements such as:

- the long-practised tradition of passing Inuit knowledge, values and teachings from the Elders down to the younger generations;

An Example of IQ in Action

A recent example of how IQ can be utilized and integrated with western approaches is found with the recent Inuit Bowhead Knowledge Study. This study on the migration and supply of bowhead whales was undertaken by the Nunavut Wildlife Management Board as set out under Section 5 of the Nunavut Land Claims Agreement. The methodology for the report included the use of both Traditional Ecological Knowledge (knowledge from elders based on first hand observation and experience) and modern science. Among other things, the study report provides information on the abundance of bowhead whales around Nunavut and their migration routes.

Source: Nunavut Wildlife Management Board, Final Report of the Inuit Bowhead Knowledge Study, (Iqaluit: March 2000).

- a system of laws, values and consultations before making important decisions that affect the community;
- an understanding of complex family relationships that is explained by Inuktitut kinship terminology;
- a knowledge of traditional healing and counselling methods and a system of dealing with fellow Inuit who need help that it based on trust and love; and
- the knowledge of wildlife, hunting techniques and an understanding of animal life, biology and migratory problems.[59]

[59]Taken from Government of Nunavut, *Report from the September Inuit Qaujimajatuqangit Workshop,* Niaqunngnut, Nunavut, September 29-30, 1999. Department of Culture, Language, Elders and Youth.

IQ affects the organisational and social capital in two ways. First, it guides the functioning of the land-based economy, both in terms of production and consumption (described in Chapter 5). Second, attempts are being made to integrate IQ within the wage-based economy and with the operations and services of the Government of Nunavut as part of its decision making process. For example, IQ is a prominent part of the Bathurst Mandate and several departments of the Government of Nunavut have established an IQ working group involving Inuit staff. Another example of how IQ can be integrated is presented in the box above.

4.4.5 Key Sectors in Nunavut's Structural and Organisational Capital

This section provides a brief overview of how Nunavut's wealth is organised under four principal players or sectors, namely government, Inuit organisations, the private sector, and institutions of public government. This section is not intended to provide a list of all of the various economic development programs, but rather to identify the principal sectors that are relied on to create wealth in Nunavut.

4.4.5.1 Government

As will be shown in Chapter 5, government plays an enormous role in the economy both as a direct employer and as a principle customer of local businesses. This includes the Government of Nunavut, the Government of Canada as well as local government.

The Government of Nunavut is a major player in economic development as both an employer and in setting policies and offering programs to promote economic development. For example, to comply with Article 24 of NLCA regarding procurement policies to assist Inuit firms (51 per cent Inuit-owned) in competing for government contracts, the Government and NTI drafted the Nunavummi Nangminiqaqtunik Ikajuuti (NNI) Policy. The NNI Policy applies to contracts tendered by the Government of Nunavut or its public agencies and is intended to strengthen Inuit participation in the Nunavut economy. Favourable adjustments to bids are given to firms that are of Nunavut firm status, Inuit firm status or local status. As identified earlier, the Government has taken a community economic development approach whereby the focus of its policies is designed to support economies at a community level.

The Department of Sustainable Development plays a lead role in promoting economic activity following the principles of sustainable development. As such, the department is responsible for managing environmental conditions and the use of natural resources. It also provides approximately $13.7 million in grant and contribution programs for economic development in the Territory. This includes financial support to harvesters, arts and crafts producers, small businesses, and for community economic development officers. Financial support is also available to support emerging industries such as commercial fishing and the fur industry. The department's Community Futures Program funds Business Development Centres that in turn support small businesses in communities through loans and the provision of technical advice and planning. The

department also funds the Nunavut Development Corporation established in 1999. The corporation currently operates nine businesses in seven Nunavut communities in the arts and crafts and meat and fish processing sectors. The Corporation is also responsible for identifying new investment opportunities in communities to promote economic growth and diversification.[60] Other government departments also undertake economic development activities. For example, the Department of Culture, Language, Elders and Youth provides cultural and communications grants to support the arts economy.

Federal government involvement in Nunavut is guided by *Gathering Strength—Canada's Aboriginal Action Plan*, the Government of Canada's response to the report of the Royal Commission on Aboriginal Peoples. Indian and Northern Affairs Canada oversees the Government of Canada's statutory and regulatory obligations in Nunavut and provides financial assistance for economic development projects for Inuit on several levels including core funding for three Community Economic Development Organisations (CEDOs). Some $3.6 million was allocated for the Nunavut region for 2000-01. In addition, Inuit organisations are eligible to apply for economic development funding administered centrally.

There is also direct involvement from many other federal departments as well such as Human Resources Development Canada, Department of Fisheries and Oceans, Industry Canada and Natural Resources Canada.[61] In addition to overseeing statutory and regulatory obligations, most of these departments provide grants and programs related to economic development. For example, a Labour Market Development Agreement with Human Resources Development Canada was recently signed with the Government of Nunavut. It involves over $2 million for the next two years to Nunavut for programs aimed at hiring the unemployed, job training and the teaching of self-employment skills. Last year, Industry Canada launched the Canada-Nunavut Business Service Centre in partnership with the Government of Nunavut's Department of Sustainable Development. The Centre, located in three Nunavut communities and also accessible by phone and the Internet, provides a first point of contact for entrepreneurs seeking information on government programs and services.

These kinds of support to development notwithstanding, Nunavut officials have expressed concern over the expiration of federal-territorial economic development agreements and the lack of a federally funded economic development organisation for their region as found in other regions of Canada.

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[60]Government of Nunavut, News Release, December 2, 1999. Iqaluit. http://www.gov.nu.ca/eng/news/1999-45-C.html

[61]The Nunavut Federal Council, comprised of senior managers from all of the federal government departments responsible for programs and services in Nunavut, meets regularly to facilitate cooperation on policy and program delivery.

4.4.5.2 Inuit Incorporated Organisations

The second major sector relied on to create wealth is the use of Inuit incorporated organisations such as NTI and the three regional Inuit associations: Qikiqtani Inuit Association, Kitikmeot Inuit Association and Kivalliq Inuit Association, all of which have considerable influence in the Territory.[62] The use of these organisations has become a popular and supported model in which to pursue economic development in Nunavut. Their influence is a unique characteristic of the Nunavut economy.

As outlined earlier, one of NTI's responsibilities is to oversee the Inuit obligations under the Nunavut Land Claims Agreement. NTI recently formed the Atuqtuarvik Corporation, an arms' length investment and loan corporation that will support Inuit investments using seed funding from the Nunavut Trust. The fund is capitalised at $20 million with additional injections of $10 million per year scheduled over the next three years.

Under the NTI network, an economic development 'birthright' corporation and small business development association were established in each of the three regions: Qikiqtaaluk Corporation and Kakivak Association; Sakku Investments Corporation and Kivalliq Partners in Development; and Kitikmeot Corporation and Kitikmeot Economic Development Commission. The corporations investigate business opportunities for Inuit such as through job creation, training and skills transfer and may joint venture with interested partners. NTI has provided the birthright corporations and development associations with over $10 million to date through its Nunavut Investment Review Committee (NIRC) to support their investments in joint ventures like real estate and construction. As an example, the Qikiqtaaluk Corporation is involved in offshore shrimp and turbot fishing, airport management, DEW Line site cleanups, environmental management services, mineral development activities, helicopter operations, heavy equipment sales and service, petroleum distribution and real estate construction management activities.[63] The economic development associations foster small business development among Inuit entrepreneurs and improve job skills for Inuit. According to NTI's list of Inuit firms, there were over 250 Inuit owned firms in 1999 (43 per cent in Baffin; 28 per cent in Kivalliq; 22 per cent in Kitikmeot; and 7 per cent outside of Nunavut).

The Nunasi Corporation is another Inuit birthright corporation of which all Inuit under the land claims agreement belong. Established in 1976, Nunasi undertakes business operations that profit shareholders socially as well as economically. It owns several businesses across the Arctic (e.g., Kit Nuna, a rapidly growing construction company that is a joint venture between Nunasi and Kitikmeot Development Corporation).

Another major economic organisation is the Nunavut Construction Corporation, which is owned by the three Inuit birthright corporations and Nunasi. It was formed as a

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[62]Hicks and White, p.85.

[63]Qikiqtaaluk Corporation Website, http://pooka.nunanet.com/~qc/index.html

vehicle by which work to be done on the infrastructure for Nunavut could be shared among all communities, not just the ones in which infrastructure would be built. It was used to help build and manage the housing and offices associated with the establishment of Nunavut Territory (see box for details).

4.4.5.3 The Private Sector

The third actor involved in wealth creation is the private sector. As will be shown in Chapter 5, the private sector is very limited in Nunavut. The development of associations such as a Chamber of Commerce has been limited across Nunavut. Despite signs of improvement in the strength of the private sector (e.g., development of Nunavut business sites), the private sector relies heavily on the government sector for its business.

As identified earlier in this chapter, there are a number of obstacles to the development of a private sector in Nunavut including: the lack of business space, high transportation costs, reliance on southern businesses for supplies, a shortage of workers with the necessary skills and education, a general lack of entrepreneurial spirit, and the inability to compete with the wages and benefits provided by the public sector. For example, skilled workers in the private sector often leave for employment opportunities in government where they can receive higher wages and better benefits.

[64]Government of Nunavut, News Release, December 2, 1999. Iqaluit.

Nunavut Construction Corporation

The Nunavut Construction Corporation (NCC) is the developer responsible for financing, constructing, and managing the additional offices and staff housing that required by the Government of Nunavut.

NCC was incorporated in 1995. As a result of a Partnering Arrangement agreed to by the Government of Canada, Nunavut Tunngavik Incorporated and Nunavut Construction Corporation, NCC was given the task of developing the infrastructure project for the new Government of Nunavut.

The infrastructure projects consist of 250 housing units, and ten office Buildings, including the Legislative Assembly facility. NCC arranged 100% of the financing through financial institutions in the private sector.

The Corporation has been constructing office buildings and staff housing units in each of the 11 communities designated by the decentralization model for the Government of Nunavut: (Cape Dorset, Pangnirtung, Pond Inlet, Iqaluit, Igloolik, Arviat, Rankin Inlet, Baker Lake, Kugluktuk Cambridge Bay, Gjoa Haven).

The Nunavut Construction Corporation is an excellent example of how Article 24 of the Nunavut Land Claims Agreement can work. To date, more than 70% of its employees are Inuit beneficiaries, with 22 apprentices. Since July 1997, the NCC apprentices have logged over 80000 hours of on-the-job training.

Over 65 community and regionally based businesses in Nunavut have benefited from subcontracts and the purchase of goods and services, including roofing, marshalling, gravel and fill materials; meals and accommodations, building materials, tools and equipment rentals. In addition, sealift and air transportation is provided by enterprises owned by Nunavut Birthright Corporations.

The shares of the Nunavut Construction Corporation are divided equally among the four Inuit Birthright Development Corporations. They are the Qikiqtaaluk Corp., Sakku Investments Corp., Kitikmeot Corp., and Nunasi Corp.

As part of the Government of Nunavut infrastructure project, NCC has completed 146 housing units, and three office buildings as of March 31, 1999. By early 2000 NCC completed an additional 104 housing units and seven regional office buildings

Source: http://pooka.nunanet.com/~thencc/about_ncc.htm

4.4.5.4 Institutions of Public Government

The fourth major actor involved in wealth creation is the network of institutions of public government (IPGs) set up under the NLCA. These institutions, with their combined Inuit and non-Inuit boards, have mandates to address development issues (Nunavut Impact Review Board), water issues (Nunavut Water Board), and wildlife management (Nunavut Wildlife Management Board). They represent major "lessons learned" from the McKenzie Valley pipeline issues of the 1970s. These boards are in place and trained, thus lessening the likelihood of confusion of project delays due to lack of review mechanisms.

4.4.5.5 Coordination Among Sectors

An issue raised by all key informants was the lack of coordination among the four sectors and individual players. Several organisations are being established and starting up programs. There is a fear that unless addressed now, significant ineffective overlap among these programs will take place. This is discussed further in Chapter 7.

Economic Services
The Conference Board of Canada
255 Smyth Road, Ottawa, ON K1H 8M7 Canada
Tel: (613) 526-3280 Fax: (613) 526-4857

5 Overview of Nunavut's "Mixed" Economy

Key Highlights:

- Nunavut's unique mixed economy features both a land-based economy and a wage economy. The land-based economy or non-wage economy covers a number of activities including hunting, fishing and trapping, arts and crafts, sewing and informal child care.
- Despite its importance, there is a lack of data on the size of Nunavut's land-based economy. Estimates range from $40 million to $60 million after considering the fishing and manufacturing sectors, along with subsistence hunting and sewing.
- 1999 marked the first full year of economic data on Nunavut's wage-based economy. While caution should be taken when analysing the Territory's economy based on one data point, the figures do highlight the extent to which the Territory's economy is dependent on the government sector.
- GDP figures also show the extent to which imports dominate Nunavut's economic landscape – $562 million of imports from a $1.06 billion domestic economy.
- Relying on the government sector to meet the employment needs of Nunavut's growing population is not sustainable. Beyond the medium-term outlook, growth in the government sector will slow in relation to the growth in population. This could be problematic if the Territory does not diversify into other economic areas.

Given the status of Nunavut's four forms of capital required for wealth creation, what kind of economic performance is Nunavut achieving? One thing is clear—economic activity in Nunavut is quite different from the rest of Canada. Nunavut's unique economy means that it cannot be measured or analysed using traditional economic measurement systems used for wage based economies. This chapter attempts to assess the performance of Nunavut's "mixed" or "whole" economy by considering information on both its land based and wage economies.

Nunavut officials refer to the Territory's economy as a "mixed economy" featuring both a "land-based economy" and a wage economy. These economies are not mutually exclusive. For most Nunavummiut, the issue is not which economy to participate in but achieving a balance between both. Income is acquired in Nunavut from four sources: land-based economic activity or subsistence activity; commodity production whereby goods and services from land-based activity are sold or traded (e.g., sealskins); wage economy activity; and government transfers (employment insurance, social assistance, pensions, etc.). A household's income may be based on all of these sources with

contributions by several members of the family.[65] As noted by the Royal Commission on Aboriginal Peoples: "It is by combining income from these sources that most northern Aboriginal people have made a living for several decades and that they still make a living today."[66]

5.1 The Land-Based Economy and its Role in the Mixed Economy

> *Many Aboriginal economies continue to rely on traditional pursuits, such as hunting, fishing and trapping, largely for subsistence. Public policy has often ignored traditional economies or, at worst, undermined their viability—yet these activities remain a vital component in the mixed economies of northern communities, a preferred way of life, for their participants, and an important well-spring of Aboriginal culture and identity.*[67]

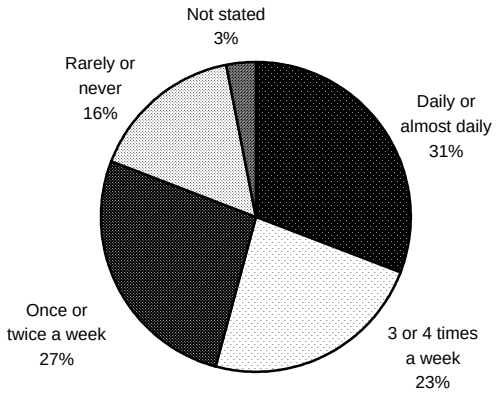
Any description of the land-based economy must start with the recognition that it represents more than economic activity—it is an integral part of the cultural and social processes of the Inuit way of life. As part of IQ presented earlier, it involves the sharing of resources with roles and responsibilities for each member based on age, gender and experience with the kinship affiliate.

The land-based economy includes all non-wage economic activity such as hunting and fishing, the production of clothes and informal childcare services. As previously outlined, the NLCA includes a number of provisions supporting the land-based economy. For example, it confers on Inuit rights to harvest wildlife sufficient to meet their economic, social and cultural needs.

Country food, attained through harvesting, is a significant part of the diet for most Inuit households. For example, as shown in Chart 3, almost 31 per cent of Inuit indicate their household eats caribou meat daily or almost daily while only 16 per cent indicated they rarely or never eat caribou. Other sources of country food include fish, seal, ptarmigan, narwhal, musk ox and whale. According to the 1999 Nunavut Community Labour Force Survey (Chart 4), a significant portion (78 per cent) of

Chart 3

Frequency of Caribou Consumption by Inuit
(per cent)



Source: 1999 Nunavut Community Labour Force Survey

[65]Peter D. Elias, "Models of aboriginal communities in Canada's north," *International Journal of Social Economics*, 1997, vol. 24, Issue 11, p. 1241-1255.

[66]RCAP, Vol.4, Ch. 7.

[67]RCAP, Vol. 2, Chapter 5.

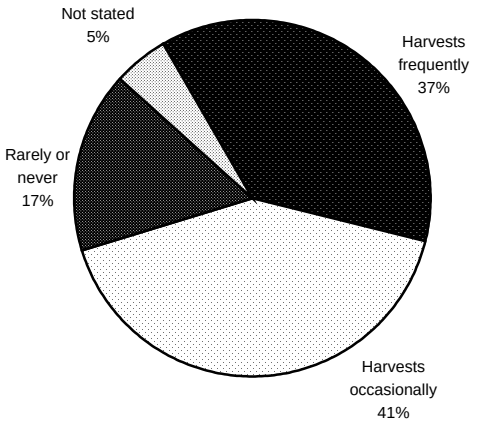
[68]Myers, p. 27.

Inuit males between the ages of 15 and 54 engage in harvesting activity frequently or occasionally.

The replacement-cost value of country food harvested in Nunavut is estimated at a minimum of $30 million or at least equal to the cost of food imports from Southern Canada.[69] Without reliance on subsistence harvesting, the amount of southern imported food would increase substantially.[70] The Government of Nunavut is currently considering strategies to improve accessibility to country foods such as increasing the distribution of different country foods between communities in the Territory. Harvesting also provides valuable by-products, particularly for the arts and crafts industry (e.g., skins for clothing, ivory for carvings and jewellery).

Chart 4

Harvesting Activity of Inuit Males
(per cent)



Source: 1999 Nunavut Community Labour Force Survey

Reliance on harvesting provides more than economic benefits. Country food can be very nutritious—Caribou meat is 27 per cent protein and has very little fat. On a social level, a boy's first kill is seen as a major milestone in his development contributing to the building of self-esteem. It also represents an important step toward playing a productive role in the community.

Land-based economic activity can be expensive. Rarely does harvesting activity alone provide the necessary resources to sustain it. It requires support from the wage economy to purchase the necessary equipment to hunt (e.g., snowmobiles, gas, rifle and ammunition) and the time required to hunt.[72] In many instances, those individuals who can afford to harvest do not have the time and expertise, while those who do possess

[69] Hicks and White, p. 38.

[70] Larry Simpson, "The Subsistence Economy," *Nunavut '99*, www.nunavut.com/nunavut99/english/subsistence.html

[71] RCAP, vol. 4, ch.6.

[72] Relocation and resettlement of Inuit communities by the Government of Canada during the 1950s resulted in grouping larger numbers of hunters together, often further away from hunting grounds. This resulted in over-harvesting in areas close to the communities and the need for motorized transportation to travel further to reach viable harvesting areas (George Wenzel, "Inuit sealing subsistence managing after the EU sealskin ban", pp.130-42.)

these skills do not have the money to purchase the necessary supplies.[73] Together these activities and skills can support each other.

Sharing resources is therefore a big part of the mixed economy whereby income from wages is shared with food and goods produced outside of the wage economy among family members and between families in the community. Participation in the wage economy is often undertaken not as an end but rather to support land-based socio-economic activities.[74]

Given its importance in the lives of most Nunavummiut, many researchers and academics have called for recognition of harvesting as an occupation or a form of self-employment. There have also been calls, such as by the Royal Commission on Aboriginal Peoples, to revamp social assistance programs into harvesting support programs to legitimise and encourage harvesting activities.

NTI operates the Nunavut Harvesters Support Program to provide financial support to communities and individuals to undertake harvesting (e.g., capital hunting items). The fund was capitalised at $30 million with equal contributions from NTI and the Territorial Government. The Territorial Government has also provided a harvesting support program since the 1970s. Funding for harvester support programs in 2000-20001 by the Government of Nunavut was $2.4 million.

5.1.1 Estimating the Size of the Land-Based Economy

All economies feature wage and non-wage activities. The current method of estimating the value of production or Gross Domestic Product (GDP) adopted by Statistics Canada is to measure almost exclusively the value of goods and services produced and exchanged for money in the wage economy. Statistics Canada does however include a few non-wage activities in its estimates of GDP. The largest are "imputed" values for household rent applied to homeowners and imputed estimates for food consumed on farms by farm households.

As discussed in the previous section, the difficulty with relying solely on this limited measure of production is that a large share of economic activity in Nunavut takes place in the household sector as part of the land-based economy. This non-wage activity is critical in explaining household incomes in Nunavut. In southern Canada the relatively small size of the land-based economy and the lack of statistical data has led Statistics

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[73]The lack of available time to devote to harvesting and the inability to maintain skills mean limits to harvesting opportunities (e.g., the hunting of some wildlife, such as seals and whales require a high degree of skill and knowledge).

[74]Heather Myers, pp. 25-40.

[75]George Wenzel, "Inuit subsistence and hunter support in Nunavut", Jens Dahl, Jack Hicks and Peter Jull (eds.), *Nunavut: Inuit Regain Control of Their Lands and Their Lives*.

[76]Heather Myers, "Options for appropriate development in Nunavut communities," *Etudes/Inuit/Studies*, 2000, 24(1): 25-40.

Canada to exclude most of it from the National Income Accounts. Since the provincial income accounts follow national definitions, imputed estimates for the production of the land-based economy have not been included in Statistics Canada's recently produced GDP estimates for Nunavut.

There is a clear conceptual justification for including estimates of the production of the land-based economy in GDP.[77] In the case of Nunavut, because of the relatively large size of the land-based economy and its importance to local economic activity, there is a clear need to include estimates when discussing territorial GDP.

Determining the real value of Nunavut's land-based economy is difficult, however, for a number of reasons. The exchange of goods and services is done without the use of money as an intermediary, which eliminates the possibility of placing an exact value on the products being exchanged. At the same time, the production of goods for home use is not accurately recorded.

Nevertheless, it is important that this production (i.e., the activities taking place outside the wage-based economy) be recognised and quantified where possible. As mentioned, NTI and the Government of Nunavut are already involved in providing assistance to Inuit working in the land-based economy. However, by quantifying its value, the land-based economic community will reach a much broader audience; one that tends to understand economics in terms of numbers. This exposure should go a long way in marketing the worth and assets of Nunavut to Canadians as well as to foreign interests.

For these reasons, an attempt is being made to develop an estimate of the land-based economy in Nunavut. Currently, surveys of the number of individuals participating in land-based activity are being conducted, and the cash value of particular goods and services are being estimated. From this, an approximate value of Nunavut's land-based economy can be made, but there are substantial gaps in the data to preclude an accurate calculation. This research by the Conference Board did not try to recalculate these estimates, but it is important to recognise the range of possible values in order to determine the relative size of the land-based economy.

Based on a variety of sources including key informants, we have estimated Nunavut's land-based economy to be in the range of $40 to $60 million. This range includes an estimate of $30 million for all food-oriented economic activity.[78] Beyond this, it is difficult to attach figures to specific activities. For instance, the arts and crafts industry is made up of components of mining (quarrying for soapstone), hunting and sealing (supply of skins, bone, etc.), and of course the actual art of carving or sewing. These activities also branch into the textile and apparel industries, and bridge between the wage- and land-based economies since some goods are traded or given to family members and others are sold to commercial wholesalers. The land-based economy

[77]See the recommendations included in the United Nations System of National Accounts.

[78]For strict comparability with GDP figures, production costs would also have to be estimated and subtracted to give net value.

benefits from tourist activity with such things as sports hunting camps and polar bear hunts, but again, a value for these activities is difficult to estimate – some have suggested it exceeds $4 million each year. Not included in this figure is the unrecorded value of child care, volunteer labour, or sharing of assets. Such activities would add substantively to the size of the land-based economy – but to this point it should be noted that the Canadian economy would also grow sizeably if home activities (childcare, housework, etc.) were included in the national figures.

As described earlier, an important element not to be overlooked in assessing the "worth" of Nunavut's land-based economy is its contribution to the social fabric of Inuit society. To this, no value can be attributed; however, its role in advancing the human capital of Inuit is the foundation on which most land-based activity begins (e.g. children learning to hunt or sew from their parents and grandparents).

5.2 Overview of Nunavut's Wage-Economy

With the release of the 1999 Nunavut economic accounts, the world received its first snapshot of the Territory's wage economy. Unlike other jurisdictions where historical time series are available, Nunavut has only been in existence long enough to generate one point of data. Therefore, it is with great caution that these numbers are used in describing anything more than the single year that they represent. This is especially so for an economy in transition, which is essentially the case in Nunavut.

This does not mean the figures are not worthy of analysis, and there are some interesting highlights from Nunavut's first year of existence. Real Gross Domestic Product (GDP) is the most common measure of economic performance describing the dollar value of all of the final goods and services produced within a jurisdiction. Economists use real figures; i.e., numbers based on a constant price, in order to prevent inflation from distorting the actual value of money in an economy.

In Nunavut, the 1999 value of real GDP was $682 million in constant 1992 prices. Meanwhile, real GDP per capita, which is often used as a measure of economic well being, equalled $25,259 per person in Nunavut compared to the national average of $24,642. Using the conventional definition, this would suggest Nunavummiut are better off than the average Canadian. However, if we look at personal income per capita in the two jurisdictions – an indicator more pertinent to most people – Nunavummiut averaged $18,630 per person while across Canada the average was $25,485.

This is a peculiar finding that can be explained through a decomposition of the 1999 figures. Table 8 shows the major components of Nunavut's expenditure-based GDP. Clearly, government – which includes federal, territorial, and municipal bodies – is the heart of the wage-based economy in Nunavut. In real terms, total government spending on goods, services and investment exceeded 55 per cent of total domestic demand compared to approximately 22 per cent at the national level. At the same time, government employed, on average, 4,006 people in 1999, which was almost half of the Territory's total employment. This number has since risen to 5,290 in the first quarter of

Table 8

1999 Gross Domestic Product at Market Prices, Expenditure–Based
(millions of dollars)

	Nominal	Real (1992 prices)
Personal Expenditures on Consumer on Goods and Services	340	320
Government Current Expenditures on Goods and Services	527	460
Government Gross Fixed Capital Formation	69	74
Construction	49	40
Machinery and Equipment	20	34
Business Gross Fixed Capital Formation	127	113
Residential Structures	10	9
Non-Residential Structures	75	62
Machinery and Equipment	42	42
Final Domestic Demand	1063	967
Net Exports	-235	-195
Exports of Goods and Services	327	298
Imports of Goods and Services	-562	-493
Statistical Discrepancy	-97	-90
Gross Domestic Product at Market Prices	**731**	**682**

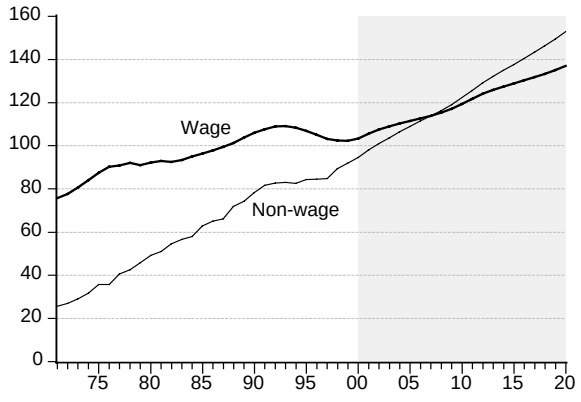
Source: Statistics Canada

the current fiscal year. Furthermore, Statistics Canada's estimate for total wages and salaries paid to government employees in Nunavut over the 1999-2000 fiscal year was $185 million, which leaves over $300 million in nominal expenditures for non-wage goods and services. This helps explain the dichotomy between the high GDP per capita along side the low-income per capita ratio. In Nunavut, government has spent the bulk of its money on non-wage goods and services. This inflates the total expenditure-based GDP figure, but has only an indirect and induced impact on personal income levels.

The current spending patterns of government are in no way surprising, since all levels of the new Government of Nunavut were required to "tool up" their operations in order to function properly. Equipping government staff and non-commercial services (e.g., hospitals, schools) with the necessary tools has become increasingly expensive throughout Canada with the proliferation of such things as desktop computers and networks. In fact, the Board foresees real non-wage government spending surpassing real wage spending over the next 20 years (See Chart 5). It is also important to note that provincial and territorial governments tend to have

Chart 5

Public Spending in Canada
(All levels of government, $1992 billions)



Source: Statistics Canada, CboC

larger wage bills, since they pay the salaries for hospital and education staff, while the federal government maintains a greater percentage of administrative staff. Nevertheless, this does raise the question, "In the future, after government is well established, how will public money be spent?" One might speculate that the overall government-spending pattern in Nunavut would gravitate toward the national average, where current spending on goods and services is divided more evenly between wage and non-wage spending. Over the medium term, this would mean more money for programs, and possibly more diverted to investment projects.

Another unique feature about Nunavut's economy can be found by comparing domestic demand with the Territory's output. In 1999, real domestic demand was $967 million, while real GDP was $682 million. This means the local population is using up a much greater amount of goods and services than it produces, resulting in a significant trade deficit of $195 million, or $6,851 per person. This trade deficit can exist without economic ramifications because of the sizeable flow of money from the federal government to Nunavut in the form of transfers and direct wages. Moreover, the growth in the government sector has spawned a growth in other local service providers, creating jobs and generating much needed money circulation. However, the longer-term fear should be the relative growth rate of these transfers versus the growth in population. After the initial expansion phase, growth in the government sector will flatten out. Because the economy is so dependent on the public sector, general economic growth will slow. The population will continue to expand, however, so that per capita growth of the economy will decline.

The trade deficit can also be discussed in terms of leakage; i.e., the extent to which every dollar earned within Nunavut leaves the Territory. Looking from a national perspective, a rule-of-thumb might be that 30 cents of every dollar spent goes toward imports, and thus leaves the country. In the case of a provincial or territorial jurisdiction, both international and domestic imports are included. An exact figure does not exist for Nunavut, but we can get a sense of the magnitude of the current situation from the nominal expenditure-based GDP values. These figures show us that in 1999, $562 million were spent on imported goods and services based on a domestic demand of $1.06 billion. Even before addressing the issue of how these imports break down between consumer, public, and capital goods and services, leakage is already at 53 cents on the dollar. The data should soon be available to determine how much of the total consumption in Nunavut is imported. Given Statistics Canada's estimate of total manufacturing output for the Territory is $2.1 million (described in greater detail in Section 5.3), we can expect to find that consumer leakage is extremely high.

Segments of the retail sector are dominated by mail order and sealift, especially in the case of durables such as vehicles, furniture and household appliances. Also, individuals planning to work in the Territory for only a few years often maintain their southern bank accounts and investments. Again, this does not have the same ramifications as it does for some jurisdictions, since the federal government supplements the outflow of money from Nunavut through transfers. The support provides Nunavummiut access to

a wider range of consumer goods, not to mention the positive impact it has on southern-based Canadian businesses.

Nevertheless, the current trend toward catalogue shopping from southern-based retailers is preventing the local economy, in particular private-sector retailers, from gaining any kind of economic momentum. This is a similar plight to the one suffered by rural communities across the country, turning many of these once flourishing communities into virtual ghost towns. The problem is that the service sector provides many people, in particular, young people with valuable jobs and work experience. Without access to entry-level positions in their communities, many young Nunavummiut interested in entering the wage-based economy may be forced to leave the Territory in search of employment.

5.2.1 Levels of Employment

In 1999, Nunavut averaged 8,646 jobs according to Nunavummit Kiglisiniartiit (Nunavut Bureau of Statistics) 1999 Community Labour Force Survey. At this level, the economic dependency ratio for the Territory is 32 per cent; i.e., for every 100 Nunavummiut there are 32 employed in the wage-based economy. The ratio describes how many people are being carried, or supported, by those who are working. This ratio is often used when looking at the viability of social programs. In Canada, the ratio is 47.7 per cent. In the case of Nunavut, it reveals a situation of few wage-based jobs, a relatively small working age population, and a correspondingly small tax base.

Nunavummit Kiglisiniartiit estimated an unemployment rate in Nunavut of 20.7 per cent in 1999 based on a labour force of 10,904. This estimate is for the national definition of unemployment, which requires a person to have actively looked for work during the month prior to the survey. This is not an entirely appropriate definition for Nunavut, as many residents in communities with weaker wage economies don't actively look for work because they know that if there is work available, it will be posted at the community store and/or announced on the community radio station. When the 'no jobs available' definition is used—which includes people who reported that the reason they didn't look for work in the last month was because they perceived there to be no jobs available—the unemployment rate rises to 27.2 per cent based on a labour force of 11,886.

This unemployment picture worsens when one looks at the discrepancy between Inuit and non-Inuit of Nunavut. Using the "No Jobs Available" criteria, Inuit unemployment was 35.8 per cent compared to non-Inuit at 3.3 per cent in 1999. Going one-step further, Inuit between the ages of 15 and 24 averaged 48.1 per cent unemployment last year. This number excludes those who are still in school or those who are involved entirely in land-based economic activity and are not seeking a wage-based job. Clearly, these youth need jobs, and to get them, they need to have an education that will help them succeed in these jobs. Again, this gets back to the issue of Nunavut's human capital and the composition of its wage-based economy dominated by skilled job opportunities in

the public sector. If this is to be the case, then the youth must receive the training required to work as a public servant, whether it is in an administrative or professional position.

5.3 Analysis of Nunavut's Sector-Specific Performance in 1999 (Wage-Based)

As mentioned, the difficulty in assessing the 1999 figures is that there is nothing available for comparison purposes. For instance, real construction activity amounted to $60 million in 1999 – a year when the rapid growth of government created demand for the construction of office space, housing and other new amenities. These activities almost certainly raised the level of construction output from its 1998 level, but by how much? And more importantly, does the 1999 figure represent a sound, underlying base of activity; i.e., taking away all "special" construction projects such as mine start ups, or one-time government projects, what is the sustainable level of construction output? Furthermore, the creation of Nunavut as an independent territory has brought with it an increase in activity through a new Canadian interest; however, this is likely to be short lived. When the interest fades to a sustainable level, what will be the underlying growth in the economy?

Chart 6 shows the breakdown of the major economic sectors as a per cent of total real GDP. It is interesting to note that some key sectors in Nunavut's economy appear to be remarkably small contributors to the Territory's overall economic performance, such as fishing and trapping and manufacturing.[79] However, as discussed, these sectors are dominated by land-based community economic activity which are not included in the GDP figures. This is a good example of the importance of including both the wage- and land-based economies in any analysis of Nunavut's whole economy.

[79] As will be discussed in Section 7.2.2, some wage-based activity within Nunavut's fishery has gone unrecorded by Statistics Canada, which lowers the industry's relevant size within the Territory's economy.

Table 9 includes very preliminary nominal estimates for wage or market based GDP organised under the Standard Industrial Classification system used by Statistics Canada. The estimates are based on Statistics Canada's recently released GDP by industry estimates based in constant 1992 dollars. These estimates were then "inflated" to current 1999 dollars and the Statistics Canada estimates for a few industries were

Table 9

Nunavut's GDP at Factor Cost in 1999
(millions of dollars, nominal)

	Conventional (Wage-based) Economy
Fishing & Trapping Industries	7.6
Mining (Inc. Milling), Quarrying & Oil Wells	129.9
Manufacturing Industries*	9.4
Goods Producing Industries	**212**
Transportation and Storage Industries	21.3
Communication & Other Utility Industries	25.6
Wholesale and Retail Trade Industries	47.2
Finance and Insurance Industries	127.6
Business Service Industries	12.2
Government Service Industries	141.7
Federal Government	16.2
Government of Nunavut	67.5
Local Governments	57.9
Educational Service Industries	78.3
Health And Social Service Industries	63.6
Accommodation, Food & Beverage Services	14.6
Other Service Industries	9.9
Service Producing Industries	**542**
Gross Domestic Product at Factor Cost	**754**

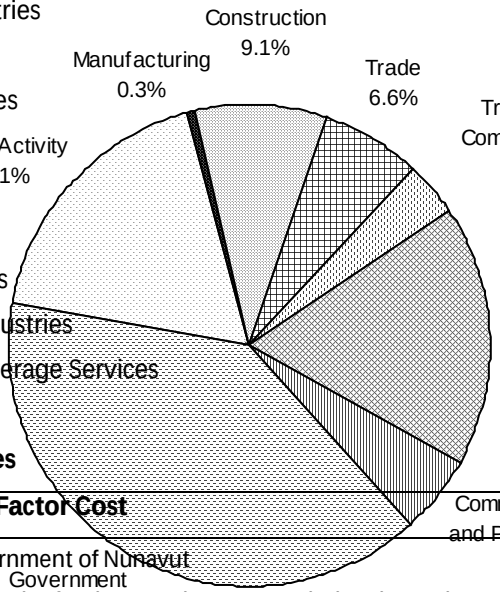
Source: Statistics Canada, Government of Nunavut

* Manufacturing Industries includes food processing, cottage industries such as arts and crafts, and other manufacturing activities.

Note: The figures will not match those shown in Chart 5, since these include information not currently being reported by Statistics Canada and have been converted to nominal terms.

Chart 6

A Look at the Wage-Based Sectors of Nunavut's Economy in 1999
(per cent of real Gross Domestic Product)



Source: Statistics Canada

revised to include other data.

The following sections review the more significant industrial sectors in Nunavut's economy. Some of the sectors discussed below draw on GDP figures from more than

one industrial category. For example, as will be explained later, tourism can include economic figures collected under the transportation, construction, and commercial business categories. See box in section 5.5.3 for another example of how manufacturing can fall under more than one industrial category and under both the land-based and wage economies.

5.3.1 Fishing, Hunting and Trapping

Statistics Canada estimates that the commercial fishing, hunting and trapping industries contributed $7.6 million to wage-based GDP in 1999. While not a large sector in dollar terms, fishing, hunting and trapping provides an important and expanding source of income and employment in Nunavut.

The major commercial operations include the turbot, shrimp and char fisheries. The offshore commercial industry, which includes the turbot and shrimp fisheries, is growing and is providing training and employment opportunities for Nunavut residents.

Current Nunavut allocations in the turbot fishery amount to approximately 27% of its adjacent resource (North Atlantic Fisheries Organisation (NAFO) Divisions 0A & 0B) – giving it 1,500 tonnes per year. Starting in 2001, Nunavut will receive a new quota of up to 4,000 tonnes per year in NAFO Division 0A resulting in an increase in its adjacent turbot quota to approximately 47%. When sold, this should bring in more than $8 million in revenues. The turbot industry also provides about 100 seasonal jobs in both the harvesting and processing sectors and contributes between $2.1 and $2.4 million in wages to Nunavut residents annually and another $1.7 to $2.0 million in royalties.

In 1998, the Nunavut Wildlife Management Board established a Nunavut Settlement Area (NSA) quota for striped shrimp of 500 tonnes in the area around Resolution Island. It contained a provision to fish an additional 500 tonnes provided that the overall catch limit for striped shrimp in Shrimp Fishing Area's (SFA's) 2,3 and 4 has not been reached.

In 1999 an exploratory pink shrimp fishery was established in SFA 2, which resulted in a 1,750 tonne allocation for Nunavut or 50% of the exploratory quota of 3,500 tonnes. In addition Qikiqtaaluk Corporation (QC) has 1.5 offshore licenses to fish shrimp in both adjacent and non-adjacent waters. The quota associated with those licenses range from 2,500 to 3,000 tonnes per year. The sales value of this catch can range from $15 to $25 million although currently all of the production is landed outside of Nunavut.

The shrimp industry currently provides seasonable employment for about 50 local Inuit and approximately $1.8 to $2.0 million in crew wages. In addition, royalties obtained from the shrimp industry are estimated at $1.7 to $2.0 million per year.

Currently all of the vessels used in the shrimp fishery are from outside of the Territory and one of the major obstacles to greater Nunavut participation is the large investment

required to purchase vessels. As quota increases are achieved, opportunities may develop to expand into investment in vessels and docking facilities. If this happens it would also provide the opportunity to land and process shrimp in Nunavut, which would provide significant employment and business opportunities.

The inshore turbot and char fisheries are relatively small and provide limited employment but offer greater opportunities for further expansion and development in both the harvesting and processing sector. As well, the development of emerging fisheries such as clams, scallops and sea urchins may provide a much-needed boost to local economies. The processing of fish products is captured under "food processing" by this classification system and is therefore discussed in section 5.3.3.2.

The largest commercial caribou hunt in Nunavut is based in Coral Harbour, located on Southampton Island in Hudson Bay. Some 2,200 caribou were harvested in the 2000 hunt and the animals were processed at Keewatin Meat and Fish in Rankin Inlet. The federally approved hunt employed about 40 Coral Harbour residents.

Musk ox have been harvested and processed at a temporary abattoir near Cambridge Bay with the meat transported to the Kitikmeot Foods plant for further processing. These musk ox hunts have employed about 32 people and pumped as much as $160,000 into the local economy.

High processing and transportation costs, concern of the stability of the resource base, and problems with weather act as barriers to further expansion of the harvesting industry in Nunavut.

The market for sealskins has been declining over the years. In 1999, approximately 7,000 seal hides were purchased through the Government's fur program and sold at auction. Under this program harvesters receive a fixed price of $30 per seal pelt. The sealskin trade is worth over $300,000. The Government of Nunavut launched an aggressive program in 2000 to promote the wearing and use of sealskins.

5.3.2 Mining Industries

The mining industry in Nunavut contributed $129.9 million to GDP in 1999. This contribution consists of two direct activities: mineral exploration and mineral extraction. Mining operations have a multitude of spin-off activities such as increases in construction, commercial services and transportation and storage. All exploration activity performed by private operations falls under services incidental to mining according to the Standard Industrial Classification (SIC) system. It consists of activities surrounding the gathering of information on mineral deposits (arial mapping, core sampling, etc.) as well as some on-site service activity such as drilling. Government and private firms spend millions of dollars over several years gathering data on the mineral deposit prior to the development of a mine site. This activity employs a number of local residents, which contributes to the Territory's economy directly. It should be noted that economic activity performed by government would be recorded under public administration.

Mineral extraction is the primary source of value-added GDP within the real mining output figure. Nunavut currently has three operating mines. Polaris and Nanisivik are both base-metal mines and are located in the eastern arctic while Lupin, a gold mine, is in the western arctic almost at the NWT border. Thanks to an increase in proven and probable ore reserves, the outlook for the Nanisivik base-metal mine at the top of Nunavut's Baffin Island has improved and, at current ore processing rates, the mine could be in production another five years. Gross revenue for the Nanisivik mine was $84.8 million in 1999.The Polaris mine in Little Cornwallis Island shipped 245,000 tonnes of zinc and 57,000 tonnes of lead concentrate in 1999. Due to low reserves the Polaris mine is expected to close July 2001. The Lupin mine reopened in 2000 and is expected to operate until 2004.

Although the existing mines in Nunavut are winding down production, there are a number of promising projects in the exploration and pre-development stages. Toronto-based Tahera Corporation has begun a feasibility study for mining its diamond-bearing Jericho kimberlite pipe in Nunavut. Assuming all approvals can be expedited, Tahera is hoping to construct the mine in 2001 with production beginning in 2002. Capital expenditures for a mine are estimated at $40 million.

WMC International (the managing and majority partner) completed a pre-feasibility study on the proposed Westmeg (formerly known as Meliadine) project located near Rankin Inlet. The project contains an estimated 4.9 million ounces of gold with the bulk of the gold bearing rock near the surface lending itself to open pit designs. The project is estimated to cost about $250 to $300 million to construct and is expected to employ 300 people, including as many as 100 local residents. The mine would lead to a building boom in Rankin Inlet and would require significant investments in infrastructure to improve dock, warehousing and transportation facilities as well as new housing. The project is currently stalled, as low gold prices have made the project not financially feasible.

Two more promising gold mineral deposits are the Meadowbank and Hope Bay Projects. Meadowbank is owned by Cumberland Resources and is located 70 kilometres north of Baker Lake. It contains resources of 2.1 million ounces. The Hope Bay Project is a joint venture owned by Miramar and Cambiex and is located close to Bathurst Inlet, containing estimated resources of 4.3 million ounces.

A major lead-zinc deposit is located at Izok Lake, which is west of the Lupin mine, but development will not become feasible until a road and port are constructed.

Major barriers to the mining industry in Nunavut touch on all four forms of capital described in Chapter 4: a lack of surface infrastructure, high transportation costs and the remoteness of resources from markets; the lack of a skilled labour force, sparse information on the potential of mineral and other resources; and, strict and potentially overlapping regulatory requirements. The development of a port in the Coronation Gulf would open up much of the mineral potential of the Kitikmeot region.

As outlined in Chapter 4, the establishment of "participation or benefit agreements" between Inuit Beneficiary Organisations and the mining industries regarding specific projects is the major method of attaining benefits to the local communities from mineral developments. These agreements normally provide minimum employment levels and give preference to local participation in businesses aimed at providing goods and services to the mines.

A recent example of such an agreement was the signing, in Kugluktuk, of a letter of intent by Diavik to enter into a contract with Lac de Gras Constructors for $235 million of dyke construction work at the Diavik diamond mine site (in the NWT). Lac de Gras Constructors is a joint venture between builder Peter Kiewit & Sons Co. Ltd. (75 per cent) and Nuna Logistics (25 per cent). Western Nunavut's Kitikmeot Corporation and Nunavut-wide economic development company Nunasi, own 51 per cent of Nuna Logistics.

Mining is currently Nunavut's largest "wealth creating" industry and because most new projects will be "fly-in / fly-out" operations this industry holds out the greatest opportunities for market employment and business development in many local communities. Fly-in / fly-out operations allow residents to remain in their communities within Nunavut and commute to the mine site, rather than developing a mining town that will be abandoned after the mining operations cease. With the development of participation agreements, it is expected that more of the economic impacts of mining will stay in Nunavut than was previously the case.

New mining developments would also lead to increased resource royalties, which could provide further income to local Inuit beneficiaries (although only a small portion of mining royalties are paid to the Inuit benefit organisations – almost all resource royalties are paid to the federal government). Over time, it is expected that the Territory will receive a larger share of the resource royalties. When combined with an expanding mining sector, this should translate into increased revenues for the Territory.

5.3.3 Manufacturing Industries

The commercial manufacturing sector in Nunavut is very underdeveloped with almost all manufactured goods being imported from the south. It is estimated that the commercial manufacturing sector contributed $9.4 million to Nunavut's GDP in 1999.

While it is unlikely that Nunavut will ever be able to develop a strong diversified commercial manufacturing base because of high costs, limited basic infrastructure and a small local market, the manufacturing sector can play a greater role in developing specialised products where Nunavut has a competitive advantage. For example, Nunavut does have a significant traditional manufacturing industry that is based in the arts and crafts and food processing industries. Both are discussed below.

5.3.3.1 Arts and Crafts Industry

The arts and crafts industry—or the "Arts Economy"—encompasses a number of activities such as traditional arts and crafts like carvings, but also fashion and filmmaking. Because it involves so many different activities, it is difficult to estimate the size of the industry using the Statistics Canada classification system. For example, a carving would fall under manufacturing whereas filmmaking might include several categories including business services. The arts and crafts industry is seen as a segment of the economy that has considerable growth potential.

The production of arts and crafts is a natural complement to harvesting. It does this in at least two ways. The first is that it uses many of the products of the harvest industry as inputs. Second, the sales of arts and crafts help provide the cash income necessary to participate in harvesting (i.e., gas for snowmobiles, ammunition, etc.).

Arts and crafts sales generate significant revenue for Nunavummiut although, for most, it is an income supplement rather than full-time employment. The bulk of the production of arts and crafts takes place in the household with the final product being marketed to one of the major wholesalers in Nunavut or directly to the final consumer. E-commerce has the potential to open up direct markets in the south for both artists and wholesalers.

According to the 1999 Nunavut Community Labour Force Survey, 27 per cent of those surveyed indicated they were involved with the production of northern crafts. The crafts industry appears to provide an opportunity to increase participation in the economy: approximately 70 per cent of those involved with arts and crafts had less than a high school diploma and almost 60 per cent were female.

There are several large wholesaling art marketing operations in Nunavut including: Dorset Fine Arts; the Nunavut Development Corporation; the Canadian Arctic Producers (CAP) - the wholesale arm of Arctic Co-operatives Ltd.; Arts Induvik; and, the Inuit Art Marketing Service operated by the North West Company which bought out the former Hudson's Bay Company's Northern Stores. Arts and crafts are purchased from local co-operatives and marketed in southern stores. The North West Company purchases art at its local stores and ships it to a warehouse in Toronto where it is distributed to retailers in the south.

The Government of Nunavut is interested in expanding the potential of the carving industry. A meeting was held in 1998 in Cape Dorset on the Future of Inuit Stone Carving. The meeting produced fifteen recommendations for the development of the carving industry.[80]

Inuit fashion is another element of the arts and crafts industry that has received growing interest. A great deal of value is added to animal skins when they are used in

[80]See Fred Weihs and Sam Pitsiulak, *The Meeting to Discuss the Future of Inuit Stone Carving in Nunavut*, Cape Dorset, Nunavut, October 19-21, 1998.

the local manufacturing of fashion clothing. A number of companies across Nunavut have had success meeting niche markets with fashion design. Several small businesses

Recording the activities of a soapstone carving

Recording manufacturing activity can be difficult when trying to determine where it actually took place – in the land-based or wage economy and under which industrial sector. Using the example of a carver, the mining, purchase or barter for soapstone is a component of the land-based economy, and is unlikely to be captured in Statistics Canada standard data sets. The value of the time, effort, skill and intangibles (artist's renown, appreciation of previous works, etc.) that goes into a carving should be reflected in its price. When sold, the "value" that has been added to the original piece of soapstone would be counted by Statistics Canada under manufacturing. However, if the sale is made without any record, it remains a part of the land-based economy. If the buyer is a wholesaler or retailer, their mark-up on the carving is recorded in the wage economy under wholesale and retail trade. Needless to say, without accurate accounting of these activities, they will not get recorded in the official statistics, thereby making it a challenge to estimate their size.

now serve a growing market for clothing based by traditional Inuit designs and materials.

Film production is seen as an emerging component of the arts economy offering great potential. There are some enterprises involved in film already (e.g., Isuma Igloolik Productions Inc.) and a Nunavut Film Commissioner has been appointed to promote the industry. It has been estimated that 100 people work in Nunavut's film industry at any given time.[81] While government funding is limited ($300,000), opportunities exist to leverage funding with film organisations (e.g., Telefilm).

There is considerable opportunity to market more arts and craft products to business, vacation and cruise ship travellers as well as to wholesalers for southern distribution. Presently, there are few centres and exhibits where visitors can see and learn about Inuit culture and artworks.

Barriers to growth include lack of marketing, problems with the availability of distribution outlets or systems and the need to have a source of cash income to finance production.

5.3.3.2 Food Processing Industries

The commercial food processing industries contributed $7.4 million to Nunavut GDP in 1999.[82] This sector is comprised of a number of processing plants that market locally produced meats, many of which are owned by the Nunavut Development Corporation.

[81]Denise Rideout, "Nunavut filmmakers plea for recognition, support", *Nunatsiaq News*, Iqaluit, March 23, 2001.

[82] Assessing the value-added contribution of food processing to an economy's output is rather difficult. For example, the act of catching fish is recorded under the fishing sector. The filleting of that fish is recorded under food processing, but then any kind of distribution would be divided between storage, transportation and wholesaling. Without accurate records, tracking these activities separately is next to

The largest processing plant is Pangnirtung Fisheries Limited. In 2000, they processed a record 306,178 kilograms of turbot and 24,000 kilograms of char. In 2000, Pangnirtung Fisheries employed over sixty seasonal employees at their docking and plant facilities.

Keewatin Meat and Fish is located in Rankin Inlet and currently sells its products in California, New England, and the American mid-west and in Canada between British Columbia and Quebec. The products are generally sold in high-end restaurants.

Another significant establishment is Kitikmeot Foods which is a meat and fish-processing plant located in Cambridge Bay. Kitikmeot Foods processes musk ox meat that is sold locally and to restaurants in larger territorial centres as well as southern Canadian and U.S. cities. The hides are used to produce qiviut, a soft wool, under a joint venture between the Kitikmeot Hunters and Trappers Organisation and Prince Edward Island-based International Spinners Ltd. Kitikmeot Foods also process char that is sold both locally and outside of the Territory.

High production and transportation costs act as a significant barrier to expansion of production in this sector. Another significant limiting factor is the year round availability of products from the commercial hunts.

5.3.4 Construction Industries

The construction industry contributed over $65 million to Nunavut GDP in 1999. The major driving force in the construction industry has been the infrastructure requirements of the new Government of Nunavut and the demand for new housing from the growing population. Since Nunavut was created, office buildings, a legislature and staff housing have been constructed to meet the needs the new Government of Nunavut staff. As outlined in Chapter 4, the Nunavut Construction Corporation (NCC) recently completed an infrastructure project worth an estimated $130 million with the federal government.

The barriers to local residents' participation in the construction industry relate in large part to issues associated with the development of Nunavut's human capital including low education levels in the local work force and the lack of trade and other technical skills. The NCC has been attempting to promote local hiring by providing training opportunities to local residents. But an equally serious barrier is how the construction industry is organised in Nunavut. Work tends to be concentrated in the summer months requiring sixty plus hourly workweeks and no holiday leave to pursue traditional activities normally undertaken during this time.

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impossible. One approach is to determine the value of the final consumer good and then try to distribute that value between economic sectors using the wage-based economy as a guide.

5.3.5 Wholesale and Retail Trade Industries/Business Service Industries

A noteworthy observation is the limited size of some traditionally key service-sector industries—in particular, retail and wholesale trade and commercial business and personal services (e.g., lawyers, engineers, architects, etc) which added $44 and $34 million (real), respectively, to Nunavut's economy in 1999. These numbers lag behind their national counterparts as a share of total real GDP – 6.6 per cent versus 11.1 per cent for trade, and 5.1 per cent versus 11.0 per cent for commercial business and personal services. This reiterates the discussion on the weak nature of local business in Nunavut. With no real industry to provide services to and many residents ordering goods directly from southern retailers, small business entrepreneurs have no one to serve and therefore no reason to exist. Further, tourism, transportation, and migration are limited, for the most part, by the weather conditions in the north. This has an immediate effect on the service sector since there is simply less activity during the winter months.

The business service industry, while relatively underdeveloped in Nunavut, has the potential to grow as the government of Nunavut is established and with it the demand for goods and services. Arctic Co-operatives Ltd. and the North West Company are the two largest retailers in Nunavut.

5.3.6 Finance and Insurance Industries

The finance and insurance industry sector includes banks, investment industries, insurance, and real estate agents and operators. In 1999 the finance and insurance industries contributed $127.6 million to Nunavut's nominal GDP. The sector suffers from a lack of local banking services in the smaller communities throughout the Territory, which hinders the development of small businesses in Nunavut.

The relative size of Nunavut's finance, insurance and real estate sector has raised a few eyebrows; however, this figure is not unusual for an economy in transition. Contained within this sector are all the activities associated with the buying and selling of property, all banking transactions, and the wages and salaries of all employees working in the industry. Nationally, finance, insurance and real estate make up approximately 14 per cent of Canada's total GDP – but this figure is higher in jurisdictions in which economic activity (including migration) is above the national average. In Nunavut, the explosion of economic activity plus the rapid growth of population through migration has pushed this sector's growth well above what is normal in Canada. Over time, it is likely to undergo slower growth, and will eventually be more in line with the national average.

5.3.7 Government & Related Service Industries

The government service industry (including government administration, education and health and social services) is the largest contributor to GDP in Nunavut. In 1999, it is estimated that the government sector (excluding education, health, and social systems)

contributed $141.7 million to GDP in Nunavut. The contribution of government to GDP is comprised of its labour income and depreciation on capital assets.

The Federal Government contributed $16.2 million to Nunavut's GDP in 1999 while the Government of Nunavut contributed $67.5 million. Meanwhile, local government, education, and health and social services sectors derive almost all of their income from the Government of Nunavut. In 1999, local governments contributed $57.9 million to Nunavut GDP. Educational service industries contributed $78.3 million and the health and social service industries contributed $63.6 million.

The Government of Nunavut currently receives over 91 percent of its revenues directly from the federal government. Own source revenues, such as territorial income taxes, payroll taxes, and other sources, generate the remaining 9 per cent. The largest federal source is the Formula Financing Grant, which will amount to $529 million in the 2000-01 fiscal year and is estimated to be $563 million for 2001-2002. The basic intent of the grant is to fill the gap between a territory's expenditure requirements and the revenue it can be expected to raise.

The federal grants provide income to the Government of Nunavut to enable it to provide a range of public services comparable to those offered by provincial governments. The high level of grants as a proportion of total revenues is necessary because the Territory has a small revenue base and incurs high costs to deliver government services to a large number of very small communities scattered across the north.

One problem with the structure of the grant is that the Government of Nunavut is able to retain only a relatively small portion of new revenues. In other words, if the Government of Nunavut receives new tax revenue from increased economic activity it will lose most of it in the form of a reduction in the grant. The grant formula was recently changed to include a financial incentive to promote economic activity and to encourage greater territorial self-reliance. As a result, the formula now provides an additional incentive of 20 per cent when Nunavut increases revenues through economic growth.

Another concern is that territorial governments, unlike the provincial governments, do not receive resource revenues. The problem with this situation is that often territorial governments are forced to incur increased costs (such as providing the necessary infrastructure and other government services) as a result of a new economic initiative but may gain very little in new tax revenues. This situation can act as a hindrance to economic development.

One of the major challenges of the Government of Nunavut is to find revenues to finance the wealth-creating investments needed to ensure the future prosperity of Nunavut's whole economy. While a re-assessment of spending priorities may be required, the Conference Board believes it is unlikely this will provide sufficient funding for these investments. Therefore, consideration should be given to securing

additional revenues over the short to medium term (e.g., additional federal funding, finding new revenue sources). Regardless, failure to address the physical and human capital needs of the Territory poses a tremendous risk to the future of Nunavut and this economic outlook.

5.3.8 Tourism Industries

"Tourism" is not a single industry in Statistics Canada's classification system but rather it is an activity that includes a portion of the output of a number of industries that serve both local residents and tourists. Statistics Canada's definition of the tourism industry includes parts of the accommodation and food & beverage industries, transportation industries as well as a number of other industries. Using this definition it is estimated that in 1999 the tourism industry contributed $35.7 million or 4.8% of total market GDP in Nunavut.

Tourism is a "wealth producing activity" and visitor spending in Nunavut has the same economic effect as an export of a good or service. It is "wealth" creating because tourism spending generates income for Nunavut businesses and residents. It has the same effect as an export because it leads to an "injection" of new spending (by outside residents) in the Territory. Tourism is a very important economic activity in Nunavut and can play a greater role in driving future economic growth and providing jobs for residents in their local communities.

It is estimated that over 18,000 visitors travelled to Nunavut in 1999 and they spent over $30 million in the Territory. The number of business travellers has risen dramatically in recent years. Almost three-quarters of all visitors in 1999 were business travellers. There are over 123 tourism operators in Nunavut and it is estimated that there are currently 500 people working in the Nunavut tourism and parks industry.

There are a number of national and territorial parks in Nunavut. As outlined earlier, the Nunavut Land Claims Settlement included the establishment of three new national parks. Almost 39 per cent of tourists to Nunavut report visiting a territorial or national park during their stay. According to a 1994 study, park visitors tended to stay longer and report spending more in Nunavut than other visitors.[83] However, very few of the parks are developed in terms of providing shelters and facilities for visitors.

While sports hunting and fishing will continue to play an important role in the tourism industry there are many other types of tourism that are growing and playing a greater role in Nunavut. These include "adventure" tourism products (canoeing / kayaking, hiking, etc.), cultural tourism, nature based tourism (Eco-Tourism), educational tourism and other specialised tourism products.

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[83] *Tourists Visiting Nunavut-A Profile.* Policy, Planning and Human Resources Division, Department of Economic Development and Tourism, Government of Northwest Territories, 1996.

One growing area in the specialised tourism market is the cruise ship industry. Currently cruise ships visit a number of communities in Nunavut including Pond Inlet, Cape Dorset, Kimmirut and Pangnirtung. Cruise ship passengers spend approximately $5,000 per community visit on arts and crafts, food and interpretive events. The number of cruises will likely increase in the future and with it the demand for tourism products such as town tours, cultural performances and arts and crafts sales.

Like mining, barriers to growth in the tourism industry touch on gaps related to Nunavut's four forms of capital: a lack of investment in infrastructure in parks and other visitor facilities; relatively high transportation costs faced by visitors to the north; the need to develop better marketing techniques aimed at attracting southern visitors to the unique attractions of the Territory; the need for training in the hospitality industry; and better networks that connect tourism agencies and which provide valuable information to operators on trends and usage.

6 Where Does Nunavut Go From Here?

Key Highlights:

- Increasingly we are living in a knowledge-based economy. Today's knowledge worker is required to have strong literacy and mathematics skills in order to obtain a well-paying job. Training and education—either on the job or at an educational institution—are seen as critical to success.
- Major federal transfers to Nunavut will grow by an average of 5.19 per cent over the next five years. This growth in transfers far exceeds the growth in population; meaning transfers on a per capita basis will rise to more than $24,000 per person.
- Nunavut's population is expected to grow by an average of 2.32 per cent, compounded annually, over the next 20 years. This will result in the population rising from its 1999 level of 27,002 to 43,824 by 2020.
- Nunavut can expect an increase in land-based economic activity such as in traditional arts and crafts. Other traditional pursuits such as hunting and fishing will grow at least as fast as the population, but any further growth is dependent on the carrying capacity of the caribou, walrus, and other Nunavut wildlife.
- The Conference Board forecasts real GDP to expand by an average of 2.42 per cent, compounded annually, from 1999 to 2020. The fastest growth period will come in the Territory's first ten years due to the activities surrounding the creation of Nunavut as a territory in the Canadian federation.

6.1 The Global Context

The world economy is always changing but the pace of this change appears to be accelerating. What are some of the changes that are taking place and how will they impact the Nunavut economy?

Arguably one of the most important changes taking place is the process of globalisation. Globalisation is the process whereby markets for goods, services, capital and labour are becoming increasingly integrated around the globe. The process of globalisation was illustrated only too well in 1997 when the Asian economic crisis showed just how closely linked financial markets are around the world. For Canadians, trade agreements with the United States and in multilateral forums has given a big boost to both trade and investment. It has also meant lost jobs in certain sectors, as some industries were no longer able to compete. The Nunavut economy is by no means insulated from the outside world and this provides both threats and opportunities in the years ahead.

The computer age has also had an important impact on economic activity around the globe. Increasingly we are living in a knowledge-based economy. It used to be that a high-school dropout could find a good job in the trades but that era is rapidly drawing to a close. Today's knowledge worker is required to have strong literacy and

mathematical skills in order to obtain a well-paying job. In addition, training and education—either on the job or at an educational institution—is seen as critical to success.

Linked to the rise of the knowledge-based economy is the increasing importance of information technology. The impact of new communications and other information technology is nothing short of staggering—witness the geometric growth of the Internet. Communications has also allowed new work arrangements such as telecommuting, teleconferencing and many other activities that we take for granted. The impact of information and communications technologies on economic activity around the world has already been astounding and most experts feel that the pace of change is only going to accelerate.

Another important change in the global economy has been the rise of the service sector. One by-product of globalisation has been the transfer of some labour-intensive manufacturing operations to low wage countries. As the manufacturing base of many industrialised economies has been eroded, the service sector has risen in prominence. The service sector includes industries such as financial services, restaurants and government. In some industrial economies today, the service sector can account for up to three-quarters of total employment.

With such abundant natural resources, Canadians have been known around the world as "hewers of wood and drawers of water". Around 40 per cent of Canada's exports are still resource-based. As a result, one of the more worrying trends for Canada and Nunavut has been the long-term decline of commodity prices. When the Asian crisis hit in 1997, the Canadian dollar was hit hard as commodity prices collapsed around the world. Although prices will recover when world demand picks up again, the long-term downward trend is worrying for the future of resource-based economies.

6.2 The Canadian Outlook[84]

Since the 1990-91 recession, Canada has achieved nine consecutive years of uninterrupted economic growth. Most recently, the country's economy has been booming with an average expansion of 4.2 per cent over the 1997–00 time-period. Relatively strong growth of close to 3.5 per cent is expected to continue over the near-term horizon ending in 2002. This growth will result in the reduction of excess capacity from roughly 4 per cent in 1996 to essentially zero by 2000. Recent technological advances and rapid growth in the capital stock have pushed up the estimate of potential output growth, enabling real GDP to advance at a 3.4 per cent average pace between 2000 and 2007 without putting upward pressure on inflation. After this time period, a general slowing in the rate of technological advancement is expected as the high tech sector matures and a resultant easing in the pace of investment combines with slower

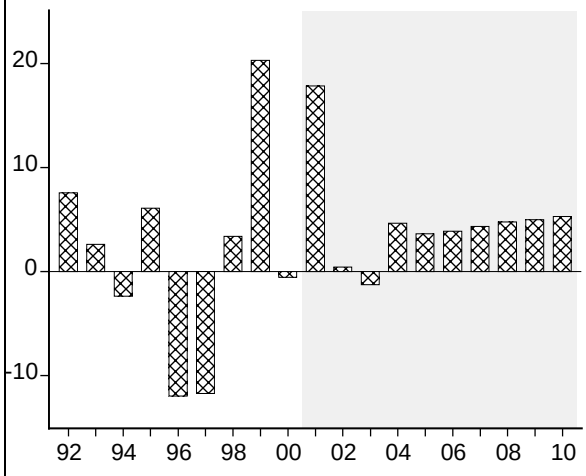
[84]This outlook is based on the Conference Board of Canada's annual long-term forecast produced in November, 2000.

labour force growth. As a result, overall real GDP is expected to grow in the 2.5 per cent range

Canadian monetary policy is expected to remain focused on the maintenance of price stability. With actual output not forecast to exceed potential over the long-term forecast horizon, inflation is expected to remain below 2 per cent over the next five years, helped in part by a slight decline in energy prices during this period. Beyond the medium-term outlook, the consumer price index will climb slowly, reaching 2.2 per cent by 2020. Meanwhile, with growth in line with potential in both Canada and the U.S. and inflation under control, we should expect a gradual reduction in interest rates. Short-term Treasury Bills are expected to average 5.03 per cent in 2005, down from an anticipated peak of 5.67 per cent in 2002.

Chart 7

Time of Growth for Federal Transfers
(per cent change)



Source: Statistics Canada, CBoC

Ongoing strength in the U.S. technology sector will continue to draw capital from abroad, and help maintain strength in the U.S. dollar. Thus, despite a strong current account surplus, continued good news on the fiscal front, and a modest further strengthening in commodity prices, the Canadian dollar will see little in the way of appreciation over the next five years, averaging $U.S. 0.708 in 2005. It is not until 2010 and beyond, when the technological revolution slows and thus capital inflow to the U.S. dissipates, that the Canadian dollar will begin to see significant appreciation, climbing to $U.S. 0.768 by 2020.

What is perhaps most interesting to Nunavummiut is the forecast for the federal government, in particular its spending plans. Government fiscal retrenchment, program cuts, and burgeoning debts and deficits filled the first 5 years of the past decade. More recently, years of living within its means on the back of an advancing economy have placed the federal government in a situation where it can offer substantive spending increases and tax cuts. Included in the renewed spending are increases in federal transfers to the regions (See Chart 7).

Current federal forecasts indicate Nunavut will receive more money in the form of the Canada Health and Social Transfer and via the Federal Formula Financing plan. In total, from fiscal 2000-01 to 2005-06, major federal transfers to Nunavut will grow by an average of 5.19 per cent, compounded annually. This growth in transfers far exceeds the growth in population; meaning transfers on a per capita basis will rise to more than $24,000 per person – an increase of more than $2,800.

6.3 Nunavut's Outlook

One of the tasks of this report was to determine the most likely economic scenario for the Territory over the next 20 years. The research conducted by The Conference Board of Canada revealed many opportunities and a seemingly equal number of obstacles for the future growth of Nunavut's wage-based economy. Careful consideration of the many viewpoints from all the interested parties was needed to ensure the forecast was complete and that we considered the whole economy throughout the entire process.

The forecast presented below is a quantified look at the wage-based economy. It concentrates heavily on the assumption that a primary goal of Nunavummiut is to raise their wage-based standard of living and heighten the monetary success of the Territory. As will be discussed, the land-based component of Nunavut's whole economy cannot be similarly quantified due to a lack of data. This does not imply a lack of importance or growth in this segment of the economy. And in actual fact, the whole economy's future prosperity is dependent on a continuation of the traditional Inuit way of life.

6.3.1 Methodology

The exercise of forecasting economic growth over a long period such as 20 years is considerably different than short- or medium-term forecasting. A long-term forecast is often put together by first assessing an economy's potential output. Potential output is the size in which an economy can grow without creating inflationary pressures. In other words, it is the productive capacity of a region's capital stock when combined with a fully employed labour force (which includes a natural level of unemployment) at a given level of productivity. Productivity is defined as the efficiency with which labour and capital investment can create output. Total factor productivity (TFP) can be affected by both changes to the quality of the labour force and the capital stock. These factors will determine the underlying trend in economic growth over the long term. The potential output is then forecast to grow based on trend growth in the labour force and capital stock, and an assumption on the TFP.

Next, the economy's current production is assessed. The discrepancy between potential and actual output, called the output gap, is then used to help economists determine whether an economy is under- or over-performing. The long-term expectation is for an economy to gravitate toward its potential over time, and once reached, the economy is said to be in its long-term stationary state.

In the case of Nunavut, the forecast process began by assessing the expected growth in labour force as a function of the population projections provided by Nunavummit Kiglisiniartiit (Nunavut Bureau of Statistics). An understanding of the existing capital stock was developed from the 1999 GDP figures to assess current production, investment, and employment levels. A list of investment projects was put together to develop an estimate of the growth in capital stock. As for TFP, the forecast contained increased spending on health care and education, which is expected to increase

productivity from its 1999 level. Combining these factors, the forecast of the underlying growth for Nunavut's real output over the forecast period was produced.

Unfortunately, the calculation of a potential output was difficult because of the lack of historical time series on which we would normally base our trend growth in labour force and capital stock. This made it impossible to estimate where Nunavut's wage-based economy is in comparison to its potential, and thus to gauge current and future inflationary pressures.

Finally, the forecast was assessed on an industry-by-industry basis gauging the likelihood of wage-based economic activity. The inclusion of particular projects and the timing of such projects were based on an estimation of the most likely scenario for the Territory's development. This does not preclude the possibility that some projects may develop faster or slower. Also, the exclusion of a project is not a statement against that particular project, but rather that at present, there is not enough evidence to support its inclusion in the forecast.

6.3.2 Population

The first step in long-term forecasting is establishing an estimate for population growth. The Nunavummit Kiglisiniartiit (Nunavut Bureau of Statistics) produced the population projections incorporated in this report.

In forecasting demographics, there are two components of growth that must be considered. The first is the natural rate of increase, which is the number of births minus deaths. This figure is determined by assessing a jurisdiction's female fertility rate – the average number of births per female of child-rearing age – and a new-born's average life expectancy. The second is a net migration assumption; i.e., the total number of people entering the jurisdiction minus the number of people leaving. In Nunavut, this would include both domestic and international migration.

As was discussed in Section 4.2 on human capital, Nunavut has the highest fertility rate and youngest population in Canada causing it to have the highest rate of natural increase in the country. This is muted somewhat by an average life expectancy that is the lowest in Canada. As for net migration, the Board was told many times during interviews that while Inuit move within the Territory, very few venture south. At the same time, the southern population living in Nunavut tends to be quite transient; newcomers to the Territory are often replacing fellow southerners that are leaving. Therefore, other than the recent influx of southerners as a result of the formation of the new Territory (which is expected to continue for a few more years), this segment of the population will not be a source of growth over the long-term. With these assumptions in place, Nunavut's population is expected to grow by an average of 2.32 per cent, compounded annually, over the next 20 years. This will result in the population rising from its 1999 level of 27,002 to 43,824 by 2020.

6.3.3 Mining Projects

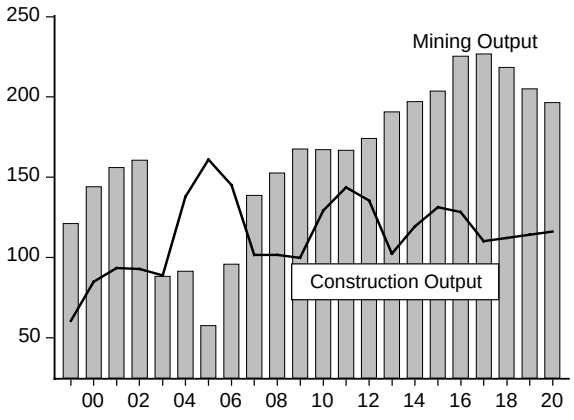
The Conference Board of Canada has included a number of mine start-ups as a major component to its forecast of Nunavut. While a contentious issue as it relates to the environment and the fears of creating a boom-bust economy typical of resource-based jurisdictions, we could not find enough evidence to suggest that mining would not proceed. Rather, the only pressing questions became – which mines will open and when? Of course, by including these mines in the forecast, the growth profile for Nunavut's economy contains years with exceptional expansion as mine sites are established and operations begin and years with little growth if not substantial declines as construction activity ceases and mines close down.

It was already mentioned that the Lupin gold mine re-opened at the end of 1999 and will remain open until 2004. In fact, along with the Lupin mine, the operations at Polaris and Nanisivik are expected to shut down for good by 2002 and 2005, respectively. This will cause a sharp decline in economic growth over that period.

Fortunately, the Territory will see an immediate economic rebound because of activities at other mine sites. The first new mine developed will be Jericho – a diamond field – in the Kitikmeot region that will begin operations by 2003. Gold deposits at Hope Bay and Meliadine are expected to begin operations in 2006, with the Meadowbank site likely to be developed around 2012. These four mines, along with their respective construction activity will be the primary engines of economic growth after government expansion slows (See Chart 8). However, based on the initial mineral deposit reports on these sites, all are expected to close over the final five years of the forecast (2016 – 2020). Without any new mining developments after 2012, Nunavut's overall economic output – in particular, the mining activity – would stagnate, then fall in the final years of the forecast period. At the same time, it would be unrealistic to assume that no new viable mineral deposits will be discovered over the next 20 years. The forecast contains a prudent assumption that one new mining operation will be developed in the final five years of the forecast period, even though its existence is not yet known. This assumption prevents the Territory from slipping into a recession over the last three years of the forecast.

Chart 8

Nunavut's Mining and Construction: Engines of Growth
($1992 millions)



Source: Statistics Canada, CBoC

The challenge in forecasting mining activity beyond the medium term is the lack of geoscience data. It is difficult to estimate the value of mineral reserves without reliable

data to back it up.[85] More importantly, mining interests and governments need this information in order to plan for the future – mining interests in order to raise the necessary funds to develop the site, and government in order to gauge where it can best spend public money. As a result, accurate forecasting of the mining sector beyond a 20-year time horizon is speculative.

The large ore deposit at Izok Lake was left out of the forecast since there is not sufficient evidence that the necessary infrastructure, including all weather roads and a deep-sea port at Bathurst Inlet will be put in place. Should the proposed development go ahead, the construction and mining sectors in Nunavut would receive an enormous boost that would more than off-set the closures of the previously-mentioned mine sites.

There are also reports suggesting that oil and gas reserves in Nunavut could exceed $1 trillion. Speculation suggests these reserves could be developed as early as 2015; however, standing in the way of this development is an enormous capital outlay to construct a pipeline linking Nunavut with North America's main gas transportation grid. Furthermore, the size of reserve needed to make such a pipeline viable represents a major shock to the existing market, and may not be attractive from a producer's standpoint. Nevertheless, if the funding were in place and the development were to proceed; the boost to Nunavut's economy would be enormous – in particular during the construction phase. As it stands, the new mining operations and their associated construction activity included in this forecast will provide the Territory with an average boost to real GDP of more than $110 million each and every year over the 20-year forecast.[86]

There should be some caution associated with the mining sector. It will elevate Nunavut's real output, but have a limited impact on Nunavummiut. In the past, most of the labour was brought in from the south, profits did not stay in the community unless there were local shareholders, and the operating firm wrote off an enormous portion of the total reported GDP figure (See Mining: What do the numbers mean?). This leaves wages and salaries as the primary direct impact on Nunavut's wage-based economy, but even this is dependent on the number of Nunavummiut employed. Through the signing of the Nunavut Land Claims Agreement, mining companies are supposed to employ an agreed upon percentage of Inuit. The aim is for Inuit to receive on-the-job training that will be easily transferable to other mine sites and other industries. There should also be growth in the service sector as an indirect result of the mining industry. This being the case, it will be critical that Inuit are offered an education that includes the basic skills needed to walk onto a modern mine site. Once again, this raises the issue of

[85]As noted in Chapter 4, there is a lack of geo-science data for the entire territory. This limits government, and especially business from including Nunavut's mineral deposits in their planning process and makes accurate forecasting of the mining sector beyond a 20-year time horizon speculative.

[86]This figure was determined by finding the average difference in real GDP under two scenarios; the first, which includes the mining development discussed – which is the Conference Board's baseline forecast; and the second, which assumes no new mines are opened from 2000 onward.

Mining: What do the numbers mean?

There is a great danger in placing too much faith in regional mining projects as saviours of an economy. Certainly, the construction activity surrounding such developments can have tremendous direct and indirect effects on the local economy. This is especially the case if the labour force consists primarily of locals who receive valuable training in the process. However, once the project is in operation, the impact on the local economy can be extremely weak.

To understand why, let us look at the example of a gold mine operating in Nunavut with reserves of 4.9 million ounces and a gold price of $325 per ounce. If we assume this is the price when the mine opens and use that year as the base year, the mine will generate $1.6 billion in real revenues over its 12 years of operations. In Canada, a typical gold mine will contribute approximately half of its total output to value-added GDP. Therefore, the mining site should add $800 million to real value-added GDP. Now, $800 million is quite a boost to the Nunavut economy, even when spread over the 12-year life of the mine. But, recall that GDP at factor cost is equal to the sum of all value-added (VA) components in the economy: wages and salaries, profits, capital consumption allowance (CCA), and indirect taxes minus subsidies. Therefore, the $800 million will be distributed among the components of GDP as follows:

1) wages and salaries $252 million
2) profits $240 million
3) CCA and indirect taxes minus subsidies $308 million

The important question is what percentage of this $800 million will remain in the Territory. A mine of this size would require approximately 300 employees working year-round, of which as many as 100 could be employed locally. If we assume an average wage of $70,000, then Nunavut residents would retain $84 million from the wages and salaries component. Profits are estimated at $240 million based on a standard benefit-cost analysis practice of assuming 15 per cent profits on Canada's northern mining operations. This amount will accrue to the shareholders of the companies that provided the funding for the project and will remain in Nunavut only in the case where there are local shareholders of these companies. The mine operators will write-off a tremendous portion of the total value-added output, which will fall under the capital consumption allowance. We have no figure on this, but experience would dictate as much as $250 million of the total VA will go toward the CCA. CCA reflects Statistics Canada's reporting on the value of capital stock usage. Finally, indirect taxes minus subsidies will consist of natural resource royalties. According to Nunavut's Land Claims Agreement, 2.5 per cent of subsurface resources are owned and administered by NTI, with the corresponding royalties going to that organization. The remaining subsurface resources are administered by the federal government – which also collects the corresponding royalties. This will change over time through a devolution agreement that will transfer the responsibilities and royalties of resources to the Territory. However, this agreement will take some time to develop.

So, of the $800 million boost to real mining output and thus the total GDP for the Territory, Nunavut will retain approximately $84 million through wages and salaries. As with any other source of employment, build in the fact that the federal government will claim a portion of this through personal income tax collections and this figure drops further. Next, remember that consumer leakage in Nunavut is at least 53 cents on the dollar, and one starts to realize the total boost to Nunavut's real economy is a far cry from the $800 million that will be reported in the real GDP at factor cost figures.

These estimates are concerned solely with the statistical accounting of real GDP at factor cost. They ignore the economic benefits of mining operations, such as those stemming from the exploration and construction phases, any complimentary service sector activity that forms to serve the mine and its miners, and the social benefits gained through job training and experience. Nevertheless, it is important to recognize that a mine start-up will increase real GDP directly, but that it does not necessarily mean a similar increase in people's standard of living.

Source: CBoC, Statistics Canada, Mine facts gathered from Nunatsiaq News (December 1, 2000)

fostering growth in Nunavut's human capital. If locals are not trained and therefore are not qualified to work in the mining sector, the benefits of a mine in Nunavut are limited. In a worse case scenario, the lack of employable Nunavummiut may even jeopardise the opening of a mine.

6.3.4 Development of the Tourism Industry

The forecast includes a number of expenditures on infrastructure upgrades that will take place over the next ten years or so aimed at improving Nunavut's physical capital. These improvements in physical capital are necessary to cultivate the growth of human capital in the Territory and will lead to an opportunity to expand the tourism industry. Included in these infrastructure activities are the construction of 750 new homes, improvements in the waste, water, and sewage management systems, and some limited repairs to municipal roads. The municipal improvements (excluding the housing starts) will add as much as $4 million a year to the current level of spending in construction (in real value-added terms) over the next decade. These general repairs will initially serve local communities across Nunavut, but will have positive longer-term spin-off effects on the tourism industry. Furthermore, the Conference Board has included in its forecast the construction of a convention / cultural centre that will be built in Iqaluit before the end of the decade that will also serve both the local community and visitors. By that time, the potential will exist for the addition of a new hotel in the Territory's capital.

At the moment, Nunavut's hospitality industry is benefiting from an effort by the federal government to include Nunavut in its conferencing schedule.[87] This source of growth has limited potential – one that should be reached over the next two to three years. The tourist industry should be gearing itself toward vacationers, whose needs are very different from that of a business traveller. Vacationers typically need more activities, services, and a variety of amenities. All of which need to be developed in Nunavut.

Besides infrastructure and local retailers, Nunavut's human capital requires training in the field of hospitality. Businesspersons, clerks, guides, and interpreters all need to be trained to provide valued service to visitors. Also, greater competition or lower airfares from existing carriers in the transportation industry would make the region more accessible to more travellers – currently, many travellers spend the bulk of their travel dollars on the travel itself.

With that being said, the tourism industry is expected to take hold in Nunavut. It is expected that many of the necessary preconditions mentioned will be met and that tourism will become Nunavut's greatest export after raw minerals. More importantly, this development will provide Nunavummiut with a much wider range of employment opportunities and will alleviate the economic pressures associated with limited diversification.

6.3.5 Government

Despite the inclusion of five new mines to the 20-year outlook and increased construction and hospitality-related sector activity, government will remain the largest

[87] According to the Government on Nunavut, 72 per cent of travellers to Nunavut in 1999 were there on business.

segment of Nunavut's economy throughout the forecast period, and will continue as the single-largest employer in the jurisdiction. As discussed in Chapter 5, the reliance on government as the economic driver of the Territory exists largely through federal transfers. In the 1999-2000 fiscal year, the entire budget of the Government of Nunavut was $619 million, of which $574 million came from the federal government. Nevertheless, this system is sustainable over the long term since federal funding is not expected to disappear.

As the Government of Nunavut and its operations become established, growth in government spending will move to activities such as health-related services and education. Both these public services are in desperate need of attention if the people of Nunavut are to meet all the challenges of entering the wage-based economy. In fact, failure to improve health conditions and upgrade education levels is the greatest risk factor in this forecast. Understanding this point, the Board expects government to concentrate heavily on these issues over the next five to ten years. This action will lend itself to a continued boom in government-related activity over this period. It is not until 2010 and beyond that we expect growth levels in real government output to fall.

This eventual slowdown should be a concern in Nunavut. By the end of 2001, the three levels of government will employ well over half the working population (wage-based). However, after 2010, the non-commercial activity of the territorial government should be better situated to meet public needs. At the same time, economies of scale will dictate that the administrative side of government will not need to grow any further. Therefore, growth in real government spending will decline in comparison to the growth in population producing a decline in real GDP per capita unless other sectors in the economy make a greater contribution to economic growth. This emphasises the need to diversify Nunavut's economic base.

6.3.6 Expansion of the Land-Based Economy

Forecasting growth in the land-based economy is extremely difficult, due primarily to the fact that little hard data exists. A similar dilemma is present in all economies, including southern Canada where the shadow, or informal economy is estimated to be as much as 10 per cent of the nation's total output. The activities cannot be measured because they are hidden from the official statistics. Something that is not measured is difficult, if not impossible to forecast.

One example of how this may change is the Nunavut Wildlife Harvest Survey referred to in Chapter 4. When completed, this survey should provide analysts with a better understanding of the current status of the Territory's wildlife. It should also provide an improved estimate of the number of animals harvested and their intrinsic value.

Nevertheless, while data is not readily available, it is clear that Nunavut's whole economy is dependent on land-based economic activity. It provides a bulk of the population with food, clothing and income. But, just as important for the Territory's economic future, it is the backbone on which the tourism industry will be based.

Culture is one of Nunavut's greatest assets, and an important marketing tool. If the land-based economic community were to disappear, so would a valuable export.

In fact, a decline or loss of Inuit culture represents a major risk to the forecast. While there is some limited evidence to suggest a decline in interest to pursue traditional land-based activity, it is unclear at this point as to whether a significant drop in participation has been taking place.[88] As will be discussed in the next chapter, the younger Nunavummiut are the dominant age-cohort and will affect the direction of the economy as a whole throughout their entire lives. So, while the Conference Board does not foresee a majority of Nunavummiut returning to the land in order to make their living, it does foresee the economic need for a continuation of traditional land-based activity. Its preservation should be a priority for Nunavut and its people.

Over the forecast period, Nunavut should expect a rise in its production of traditional arts and crafts in order to meet the demand from visiting tourists. It may even happen that successful artisans will incorporate their activities in order to protect themselves against a possible economic downturn – although this would be an extreme case.[89] This would effectively bring their work into the realm of the wage-based economy. It should be made clear that the production of traditional arts and crafts can only grow as fast as demand, which is influenced by the growth in the tourism industry and in wholesale markets.

As far as other traditional pursuits such as hunting and fishing are concerned, growth will keep pace with that of the population growth for Nunavummiut, but any further growth is dependent on the carrying capacity of the caribou, walrus, and other Nunavut wildlife. Growth in hunting and fishing beyond that of population would involve the commercialisation of wildlife. However, Article 5 of the Nunavut Land Claims Agreement ensures that the undertaking of land-based activity (especially hunting and fishing) for commercial purposes shall always be secondary to traditional uses of wildlife by Inuit.

6.3.7 Prospects for a Nunavut Fishery

The short- and medium-term outlook for the Nunavut fishery was discussed in Chapter 5. Over the next five years, fish quotas are expected to increase in the region. However, if the Territory wants to realise all of the value-added benefits of a fishing industry, it will be necessary to complement the fishers with processing facilities. This is a more tentative proposition, since it calls upon the nurturing of all forms of Nunavut's capital.

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[88]Table 5 in Chapter 4 suggested low interest (4 per cent) among the young population in Nunavut to primarily pursue a traditional way of life after graduating from school (Government of Northwest Territories, 1996). However, the 1999 Nunavut Community Labour Force Survey found that over 70 per cent of Inuit males between the ages of 15-34 harvest occasionally, regularly or frequently.

[89]At best, artisans incorporating their business is many years away, but may become necessary if the tourism industry expands beyond expectations.

Among the many necessary improvements, Nunavut needs better data on its natural capital, in this case more studies are needed to assess the size and long-term sustainability of the fishery. This would provide longer-term guarantees that this industry is viable. Improving the Territory's marine infrastructure is a necessary precondition for the construction of an efficient processing plant. Technical training of Inuit fishers would provide greater opportunities for them to work as senior crewmembers aboard the fishing vessels. And finally, this development requires the financial support of the business community.

Because there are still a great number of details to be worked through, it is difficult to determine exactly how much this industry will grow. Certainly the potential exists for the creation of a hundred or more seasonal jobs in the wage-based economy; many of which will be in the food-processing sector, and provide an excellent opportunity for Inuit employment. Such an expansion would result in real fishing and fish-processing output doubling by 2010. The forecast does contain an increase in fishing output along the lines of increased quotas as outlined in Chapter 5 and the addition of a fish-processing facility in the latter half of this decade. Over the longer term, further gains will depend on Nunavut's abilities to address some of the questions currently outstanding in the industry.

6.3.8 Risks to the Forecast

The number one risk to this forecast relates to the development of Nunavut's human capital, in particular, its youth. The increased economic activity throughout the Territory that is included in the forecast will create a great number of job opportunities over the next 20 years. However, the current lack of a qualified workforce could put many of these opportunities at risk, and has the potential of jeopardising the projected economic expansion. This places pressure on the Territory to ensure that that education and training become a top priority.

Following a similar path is the acute need for improved health and social well being. An employable individual should be healthy as well as properly educated. The discussion in Chapter 4 brought out some alarming trends amongst Nunavummiut that will have damaging repercussions to their ability to work if they persist.

In Chapter 5, there was a discussion on the need for increased funding toward wealth-creating investments. Regardless of the source, this necessary spending should help address the health and education needs mentioned above.

There are also a great number of risks associated with the organisational capital of Nunavut. Many loose ends still exist with the establishment of Nunavut as a new political jurisdiction. Issues surrounding mineral rights, fishing agreements, hiring practices of the government and the private sector, and much more need to be negotiated or agreed upon. In time, it is expected that most of these issues will be resolved. In the mean time, failure to win the rights to a larger quota of fish (as an example) would not likely ruin the Territory's economic future. It would, however, halt

growth in that sector. The Conference Board of Canada recognises most of the necessary work on these issues is underway and the challenges are well understood by Nunavut's leaders and their staff. Thus, the potential for failure on all organisational activities is very small, and should not pose a significant long-term risk to the forecast. They nevertheless need to be resolved.

6.4 Wage-based Economic Growth Forecast

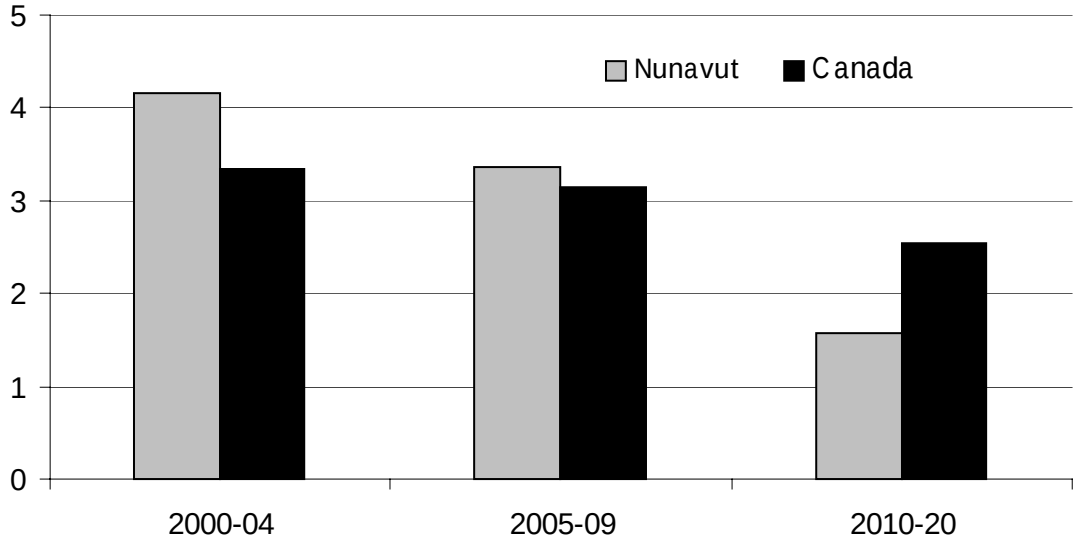
The Conference Board forecasts real GDP to expand by an average of 2.42 per cent, compounded annually, from 1999 to 2020 (See Chart 9). The fastest growth period will come in the Territory's first ten years of existence due to the activities surrounding the creation of Nunavut as a territory in the Canadian federation. The year 2000 alone will see real GDP growth in double digits. Over the first five years, beginning in 1999, the wage-based economy will grow by an average compound rate of 4.17 per cent, slowing somewhat over the course of the decade to average 3.36 per cent. Within that time frame there will be some mine closures and openings that will generate varying economic growth. Over the final few years of the forecast, growth in the economy will come to a virtual standstill due to anticipated mine closures that will choke off gains made in hospitality-related sectors. The result will be an average compound growth in real GDP of 1.23 per cent from 2011 to 2020.

Real GDP per capita will fluctuate somewhat throughout the 20-year forecast period, but again, the slowdown in the economy in the latter stages of the forecast will result in real GDP growth lagging behind that of population. This will negate most of the gains in real per capita GDP growth made throughout the 20-year forecast period, leaving it at $25,257 per person in 2020 after averaging $26,934 per person since the year 2000.

Apart from the final years of the forecast, which are anomalies in the sense that they do not represent the beginning of a long-term downward trend, the Conference Board's outlook of Nunavut's wage-based economy could be perceived as optimistic. However,

Chart 9

Real GDP Growth, Nunavut and Canada
(average annual compound growth rates)



Source: Statistics Canada, CBoC

this optimism is contingent upon a long list of economic and social adjustments taking place over the forecast period. It would be unwise to view this forecast as a passing grade, but rather a vision of what is possible if everyone concentrates on working together on common goals for the whole economy. These goals or areas where improvements are needed are highlighted in Chapter 7, which is a summary of findings from this research; the achievement of which are necessary to turn this forecast into a reality.

7 Our Future to Choose

Key Highlights:

- Societal values will continue to play an influential role in setting policy related to Nunavut's socio-economic development.
- Better data on each of the four forms of capital as they apply to Nunavut are required to establish achievable objectives and to monitor progress.
- Ensuring Nunavut's young people have the necessary education and skills will be a priority.
- There is a need for more coordination among the major economic stakeholders. Federal government assistance will have to be flexible to meet the unique developmental and demographic challenges of Nunavut. But all stakeholders must work collaboratively to successfully develop Nunavut's mixed economy.

7.1 Summary of Findings

The Conference Board of Canada was asked to provide a current assessment of Nunavut's mixed economy and assess its longer-term prospects. This was to include a look at structural issues that underlie economic performance over the longer term.

We began this report with an overview of economic development in which we said that economic growth for Nunavut is necessary to meet the needs of a growing population and a desire for products and services. Both the land-based and wage economies need to develop to achieve this growth.

We also identified four factors required for wealth creation: physical capital, human capital, natural capital, and social and organisational capital. Our analysis of each factor suggests that attention must be given to each to enable economic growth. There appear to be serious shortcomings in Nunavut's infrastructure, particularly if it is not adapted to handle the rapidly growing population. Our assessment of Nunavut's human capital shows a serious need to continue to address the low levels of education and health status among Nunavummiut given the implications this has on future growth and quality of life. Given the importance of natural capital in Nunavut, attention must be given to improving knowledge levels in such areas as wildlife and public geoscience. Finally, we provided an overview on how the organisation of Nunavut's capital will be heavily influenced by the provisions of the Nunavut Land Claims Agreement. Government and Inuit organisations and the principles of IQ are expected to play a significant role in guiding the creation of wealth in Nunavut.

In this report, The Conference Board of Canada examined the size and components of both the land-based and wage economies operating in Nunavut. We recognised the value of a mixed economy approach as opposed to a dual economy approach whereby focus is on moving people from non-wage activity to wage activity. The mixed

approach recognises the role and value of non-wage activity in Nunavut and that it has a place along side wage activity.[90] Reliance on only one is not feasible from a socio-economic perspective.

Quantitatively, it is difficult to talk about the size and level of participation in the land-based economy due to the fact that it is not captured in GDP figures. Our sources indicate the value to be approximately $40 to $60 million. With respect to the wage-based economy, the 1999 value of real GDP for Nunavut was $682 million in constant 1992-dollar terms. Real GDP per capita equalled $25,259 per person compared to the national average of $24,642.

The Conference Board of Canada has presented a forecast for Nunavut. Real GDP is forecast to expand by an average of 2.42 per cent, compounded annually, from 1999 to 2020. The fastest growth period will come in the Territory's first ten years of existence due to the activities surrounding the creation of Nunavut. Mining, tourism, and fishing are sectors with the largest potential. This forecast is based on a number of assumptions such as the development of Nunavut's youth (i.e., education, health and skills) and the development of infrastructure.

This chapter identifies some of the particular areas that the Conference Board believes are key components for ensuring that the forecast becomes a possibility and socio-economic growth is achieved.

7.2 Key Issues for Charting Nunavut's Economic Future

This report is to be non-policy prescriptive. However, The Conference Board of Canada felt it was necessary to identify key issues pertaining to Nunavut's physical, human, natural and social and organisational capital that support economic growth. Each issue is discussed separately below although it is recognised that they are interrelated.

7.2.1 What Values Are Most Important to the Citizens of Nunavut?

Choosing a course for Nunavut's economy and development will be influenced by societal values. Values play an important role in shaping policy choices. They are deep-rooted beliefs, not tied to any specific object or situation that reflect expectations about how people should behave. Values are used to help form individual attitudes on specific issues such as economic development.

While values are usually stable, they are capable of shifting in relative priority due to significant factors such as socio-economic changes (e.g., a change in economic conditions or demographics). We may feel more strongly about some values and less strongly about others at different points in time and in differing circumstances. Also, societies may hold several conflicting values simultaneously (e.g., support for greater individualism and support for a collective approach). *Changes in values are important to*

[90] See Elias, "Models of aboriginal communities in Canada's north" for a more detailed discussion on the differences.

understand because they will affect the policy choices made by a society. Furthermore, there are tradeoffs involved with all policy choices.

A recent review of values research by the Conference Board of Canada found that over the past two decades Canadians: have experienced a decline in trust for government; seek greater accountability and fiscal responsibility by government; support a move to greater personal responsibility and self-reliance; and with the exception of Medicare, have less support for universal social programs. As a result, we have seen changes in government policies such as reducing federal transfers to the provinces and territories to eliminate the federal deficit, an emphasis on improving accountability, and more targeted social spending.[91]

It is important to have a solid understanding of Nunavummiut values, particularly as they relate to economic development. Is economic development a priority among Nunavummiut? If so, what type of development is desired and what development, if any, would not be supported? What balance do Nunavummiut want to have between the land-based economy and the wage economy?

A review of key initiatives such as the Nunavut Political Accord, the Nunavut Land Claims Agreement, the work of the Nunavut Implementation Commission, and the Bathurst Mandate, demonstrates that some values have already been driving the development of Nunavut thus far. They include:

- A collective approach to socio-economic development: An example of this value is the strong belief in Nunavut that economic opportunities should be shared among all communities. A collective approach need not necessarily involve a strong role for government (as seen in Inuit society for centuries). Nevertheless, in recent decades, government has played a major role in this collective approach and government decentralisation is seen as a way to share government employment opportunities.
- A move towards greater self-reliance: The Bathurst Mandate identifies greater self-reliance as an important priority. This includes Inuit having greater political and economic control of Nunavut and its environment. A number of policies such as the implementation of Inuit participation in the public service, the NNI Policy on procurement, and having Inuktitut the language of government exhibit the importance of maintaining control over the future direction of Nunavut. Reliance on external resources (i.e., human resources, investors, and businesses) is not actively encouraged. There is reluctance to seek outside investors or enter into partnerships with external businesses out of fear of losing control.
- Inuit Qaujimajatuqangit (IQ): There is recognition of the value of Inuit knowledge and integrating it with other knowledge sources. Consensus building and

[91]Stephen Vail, *Changing Values Challenge the Canadian Way* (Ottawa: The Conference Board of Canada, 2000).

consultation is the preferred route for decision making. Steps are being taken to integrate IQ into the work and services of the Government of Nunavut.

- Economic development should be focused primarily at the community level: There is very strong attachment to one's community. Many academics and officials are calling for economic development strategies to take place at the community level rather than on a territorial level that tends to focus on activities like mining where local participation is low.
- Land-based economic activity is an important part of life and must be supported: There is no evidence to suggest that land-based economic activity is valued less than participation in the wage economy. Many desire to participate in both.
- Sustainable development: Economic development must follow the practices of sustainable development whereby equal importance must also be given to the development of human and natural capital.

There are two considerations regarding values that will influence policy choices in Nunavut. First, there must be recognition of the inherent tradeoffs with each value and the need for sustainable policy decisions. For example, a decentralised government will lead to greater distribution of government jobs across the Territory. However, it will also likely mean increased government operating costs and less money for program spending. The use of consensus building for decision-making might lead to decisions that have higher levels of support but take longer time to be made.

The second consideration is whether these values are in fact important to Nunavut's younger population. For example, the 1999 Nunavut Community Labour Force Survey found that almost 60 per cent of Inuit would be willing to move for a job or for a better job.[92] Other studies have suggested that younger Inuit are interested in pursuing careers in the wage economy.[93] And as pointed out earlier, few Inuit in school appear to desire a complete return to a traditional lifestyle. Given Nunavut's demographics, it can be expected that the values and aspirations of its young people will drive future policy decisions pertaining to Nunavut's socio-economic development just as the baby-boomer generation has done in southern Canada and the United States. No doubt, there will not be unanimity on these questions, but having a better sense as to where there is consensus (e.g., the youth, or elders) will provide clearer direction on economic development decisions.

7.2.2 The Importance of Increasing Knowledge on Nunavut

Increasing our knowledge about Nunavut on all four forms of capital is required to support the establishment of achievable socio-economic development objectives and to

[92]Nunavut Bureau of Statistics, '*Nunavut Add-On*' to the 1999 Nunavut Community Labour Force Survey.

[93]Heather Myers and Scott Forrest, "Making Change: Economic Development in Pond Inlet, 1987 to 1997," Arctic, Vol. 53, No. 2 (June 2000), p. 134-145.

monitor their progress. Solid information and knowledge will be increasingly necessary to secure investments from government or private investors who face competing requests.

As indicated by NTI in its assessment of the NLCA: "The lack of a complete, quantitatively reliable picture of Nunavut society is itself a major obstacle to more informed and insightful policy making and the better use of public resources."[94] The Government of Nunavut is mandated with many of the same responsibilities as a provincial government and, as such, it requires a sound statistical information base to help develop and monitor programs and policies designed to meet this mandate. Indian and Northern Affairs Canada and other relevant federal departments also require up to date information to support their policy and programming activities for Nunavut. In addition, the business, labour and educational sectors in Nunavut require the same statistical data that their counterparts in the south do.

However, one need not look very far to conclude that there is a lack of information on many aspects of Nunavut. As has been shown, there is very little information on:

- The health and social status of Nunavummiut: Nunavut's human capital is a crucial piece to economic development yet little data appear to be available on the health and social status of its people.
- Nunavut's natural capital including the lack of public geoscience: If the land-based economy should continue to play an important role in the lives of Inuit more knowledge at an aggregated level is required to manage it in a sustainable manner. Likewise, without a clear picture of the mineral wealth or stocks of fish it will be difficult to attract investment. Surprisingly, very little is known about Nunavut's natural capital.
- Nunavut's land-based economy and how it functions: As demonstrated, the land-based economy is a very important source of (imputed) income to households in Nunavut. While detailed consumption data is difficult to obtain, there is sufficient information to make estimates once a framework has been established. Data gathering organisations like Statistics Canada and Nunavummit Kiglisiniartiit (Nunavut Bureau of Statistics) will need to work closely to ensure that all economic activity is adequately covered and production boundaries for the land-based economy and methodologies for consistent and regular estimates are developed.
- Nunavut's wage-based economy: There is a need for improved estimates for commercial hunting, sealing, fishing and food processing activities which are of special importance to Nunavut. Such statistics would capture a very important and growing source of employment in Nunavut. It would seem that a portion of this economic activity is being missed. For example, figures provided to Statistics

[94]Nunavut Tunngavik Incorporated, Taking Stock: A Review of the First Five Years of Implementing the Nunavut Land Claims Agreement (NTI: December, 1999), p.21

Canada do not appear to be including the employment impacts of the emerging shrimp fishery. The figures also appear to be missing a portion of the processing sector. Efforts to capture this data will require the collaboration of all pertinent stakeholders. Similarly, it is important to acquire a better understanding of the role that Inuit business organisations play in the Nunavut economy.

There are a number of reasons to explain the lack of Nunavut specific data. The first problem is that very little Nunavut-specific data are available prior to 1999. Until then, data are usually included with figures for the Northwest Territories. Yet historical data can help with the general understanding of economic and social trends through the building of econometric and other economic models. While the splitting of the data between Nunavut and the NWT for the years prior to 1999 would pose methodological challenges the benefits of this work would be substantial. A precedent was established for this type of work when the combined statistical data for the NWT and Yukon was split in the 1980's.

Second, Nunavut has a very small population and with it a small economic base. This combination can pose significant problems for any statistical system. For example, the small number of businesses can result in confidentiality constraints and the inability to publicly release data in many areas. Also, if only a few establishments are missed in a survey it could lead to a significant distortion of the importance of certain economic activities. The small population numbers can also affect the analysis of health and social services data and the extent of land-based economic activity in the Territory. Another concern is that in many cases a census must be taken (because of the need for statistically reliable results) and this can lead to problems with response burden as people get surveyed repeatedly.

Third, the data for some indicators just simply do not exist. In some instances, government databases in Nunavut have not yet been established. In other cases, the lack of data is a problem that lies with the indicator itself. For example, there is a general lack of data and acceptance of indicators to measure the effectiveness of health-care services and other social programs.

A fourth reason for the lack of Nunavut data is that much of the knowledge to date has been based and coordinated in southern centres. The establishment of the Canada-Nunavut Geoscience Office and the work of Arctic College's Nunavut Research Institute are playing valuable roles in coordinating research but more work appears necessary to pull together the various sources of knowledge and influence research priorities toward addressing the gaps referred to above.

Other steps are being taken to address these gaps in data. Since the Government of Nunavut was recently established, a considerable amount of Nunavut-specific information has been generated. There is recognition of the importance of a strong capacity to generate important information on Nunavut and its people as seen in the work of Nunavummit Kiglisiniartiit (Nunavut Bureau of Statistics) to date and the Government of Nunavut's efforts to collect information and knowledge from elders.

Nunavummit Kiglisiniartiit is also working closely with Statistics Canada to address some of the gaps outlined above.

Once the information exists, it must be easy to find or access. It can be extremely difficult for an organisation operating outside of Nunavut to access information. Much of the information is unavailable electronically, which has become the source for information for most people in today's information world. Better integration of information sources is also required to assist not only researchers but investors as well.

There appears to be no single source or repository for Nunavut information as of yet. What data do exist may be housed in a number of different locations, departments or databases. Many jurisdictions, including smaller ones, are now developing reports and repositories of information that can be helpful in providing a snapshot of conditions. For example, The Greenland Yearbook is an excellent example of a single point of reference on much of the information that we have tried to include in Chapter 4.[95] On a more specific level, the Government of Yukon produced a health status report in 1998.[96] It is our understanding that the Government of Nunavut's Department of Health and Social Services is in the process of developing a similar health status report. This would greatly assist to identify priorities for attention and to track progress on key health and social outcomes.

Efforts to increase knowledge about Nunavut require an on-going commitment. As previously identified, the Nunavut Land Claims Agreement called for a number of surveys pertaining to the Territory's natural capital. Five-year funding was committed to undertake the Nunavut Wildlife Harvest Study scheduled to wrap up in May 2001. The study will provide valuable information on harvesting. Stakeholders, including the Government of Nunavut, Indian and Northern Affairs Canada and non-governmental organisations, are now working together to consider what subsequent types of harvesting data are required and to ensure that mechanisms are in place to collect this type of information on an ongoing basis.

7.2.3 The Importance of Education and Skills Development

Clearly, education is an important issue in considering Nunavut's demographics and the goals that have been set for this new Territory. Nunavut's large proportion of young people will be perhaps the defining feature of Nunavut's first 25 years of existence. Ensuring these young people have the necessary education and skills must be a priority to provide them with opportunities, to drive Nunavut' economy and help support the financing of important public services.

Putting more resources into an improved formal education system is not the entire solution. There must also be the fostering of a learning culture in many areas including

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[95]The Greenland Yearkbook is available on at line at: http://www.statgreen.gl/English/IndexUK.htm

[96]Yukon Health and Social Services, *Health Status Report 1998*. Whitehorse, 1999.

IQ and the use of information and communications technologies. The growing younger population will require role models and continuous demonstrations of the importance of all forms of education.

The Conference Board of Canada has undertaken considerable work in identifying the necessary skills for the wage-based workplace. As identified in *The Economic Benefits of Improving Literacy Skills in the Workplace,* the Board stated:

> *No matter how much capital investment occurs, without adequate investment in workforce training and education employers will remain unable to harvest the full potential of that investment. The country's economic well-being depends on its capacity to make the most effective use of people and to maintain the skills of its workforce. More highly skilled, literate people are the key to increasing productivity.*[97]

The report found that employees with higher literacy skills earn more income, are less likely to be unemployed, experience shorter periods of unemployment, are more likely to find full-time work, and are more likely to receive further training.

The Board has also been working with a wide range of partners to identify the employability skills for workers to enter, stay in and progress in the world of work. *Employability Skills 2000+* identifies three main areas of skills that are required: (1) Fundamental Skills (how to communicate, manage information and use numbers); (2) Personal Management Skills (demonstrate positive attitudes and behaviours, be responsible, be adaptable and work safely); and, (3) Teamwork skills (work with others, participate in projects and tasks).[98] While there may be some differences in how these skills are applied to Nunavut settings, it will still be important for a significant portion of Nunavut's workforce to possess these skills to ensure Nunavut residents can compete with others to provide services both in and outside of the Territory. Efforts can also be made to attract skilled Inuit who are presently working in southern Canada.

Our attention to skills also includes the necessary skills to participate in the land-based economy. This segment of the economy has its own set of necessary skills for successful participation (e.g., IQ knowledge, navigational skills, hunting skills, carving and quarrying skills). The key issue is whether structures and processes (informal or formal) are in place to ensure that these essential skills are being taught.

7.2.4 The Impact of the Nunavut Land Claims Agreement on Economic Development

The Nunavut Land Claims Agreement will have a major effect on the future development of Nunavut. The Conference Board of Canada was asked to include as assessment of the Nunavut Land Claims Agreement (NLCA) in respect to economic development. As identified in Chapter 4, the Agreement includes numerous provisions

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[97]The Conference Board of Canada, *The Economic Benefits of Improving Literacy Skills in the Workplace* (Ottawa: The Conference Board of Canada, 1997), p. 2.

[98] The Conference Board of Canada, *Employability Skills 2000+*. (www.conferenceboard.ca/nbec)

related to economic development, although it is recognised that the Agreement is broader in scope.

On a general level, the NLCA provides economic benefit by providing greater control and accountability over decision making related to the factors of wealth such as natural capital. The Royal Commission on Aboriginal Peoples stated that greater political control over resources and decision-making provides important conditions for economic growth.[99] As Hamley notes, previous land claims agreements have not significantly improved socio-economic conditions in Aboriginal communities but the Nunavut Agreement seems to have been "the most accommodating of Native aspirations, the most promising in the opportunities it offers and the most generous in its provisions." [100]

The Agreement also provides for a higher degree of certainty for investors and businesses compared to jurisdictions with unsettled land claims. Given that the Agreement is relatively new, however, there is a need to make this political and economic certainty better known to outside businesses and groups who may not be aware that the formation of Nunavut included a land claims agreement. Also, there is still some uncertainty as to the regulatory and policy approach that will be taken by the public authorities established under the Agreement.

Given the important role government plays in the Nunavut economy, Articles 23 and 24 of NLCA, aimed at greater Inuit involvement in government and its operations, can be major contributors to economic development. However, there should be recognition that implementing many of these provisions will take time. As found in the first independent review of the Agreement (a review is required to be undertaken every five years) covering 1993-1998, many of the provisions have yet to be implemented. According to the review, of the 193 obligations included in the Agreement, 98 had been substantially completed, 46 had been partially completed and 49 were largely unmet.[101] Of particular interest, the review concluded that:

- implementation on Article 23 dealing with Inuit employment in the Government of Nunavut was disappointing with most obligations being largely unmet;
- implementation on Article 24 dealing with assisting Inuit firms to compete for government contracts has been mixed with poor capacity to monitor its effectiveness; and
- the Agreement has led to greater control and involvement in decision-making by Inuit related to land, water and natural resources.

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[99]RCAP, vol.2, ch.5.

[100]Hamley, p.229.

[101]N. Louise Vertes, David M. H. Connelly and Bruce A. S. Knott, *Implementation of the Nunavut Land Claims Agreement; An Independent 5 year Review, 1993-1998* (Yellowknife: Ile Royale Enterprises Ltd., 2000), p. 4.

The review concluded that it is not possible to make any conclusions on the impact of the NLCA on socio-economic conditions of the Inuit population at this time. However, a 1999 survey for the review found that 60 per cent of Inuit believed the NLCA has had a positive impact on their lives.

Evaluation studies of existing land claims agreements have found somewhat disappointing results.[102] Socio-economic conditions have changed very little under the Inuvialuit and James Bay agreements. Research conducted for the Royal Commission on Aboriginal Peoples found three common problems: implementation problems; limited local investment opportunities due in part to small and narrowly focussed regional economies; and excessive bureaucratisation.[103]

7.2.5 The Role of the Federal Government

There is a strong feeling among many Nunavut officials that despite the establishment of the new Territory, the federal government still has an important role to play in the socio-economic development of Nunavut. They argue that federal funding is required for basic public investments that will build up Nunavut's capacity to pursue economic development activities. Nunavut officials would like to see the federal government provide funding for northern economic development as it does in other regions of the country such as through economic development agreements or in the establishment of an economic development organisation.[104]

Nunavut officials are also calling for greater flexibility in federal programs so that they can be more in line with Nunavut's stage of development, particularly in regards to infrastructure. On their own, economic development programs based on per capita formulas or designed to support already-established industries may have limited impact in Nunavut given its small population and less established industries. For example, the current Canada Infrastructure Program will only provide approximately $2 million for Nunavut' physical capital needs.

But economic development assistance will have to be planned carefully. Mega-projects in Canada have had poor rates of return. Financial assistance for Nunavut will have to recognise the unique situation in which Nunavut finds itself stemming from differences in demographics, limited physical capital, and large undeveloped potential.

This report has noted that Nunavut is at a special stage of development. We identified the need to address infrastructure (e.g., housing, transportation and

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[102] Hamley, p. 232.

[103] RCAP, vol. 2, Ch.5, S.1.2.

[104] For example, the Federal Economic Development Initiative of Northern Ontario (FedNor) promotes economic growth, diversification, job creation and sustainable, self-reliant communities in Northern Ontario). Some discussion has taken place among INAC, the Government of Nunavut and NTI (as well as the two other northern territories) on an overall approach for economic development.

telecommunications) and knowledge gaps as prerequisites for economic development. These are costly investments. It will be important to determine the role of the federal government in addressing these issues and to recognise that its contribution must be part of a collaborative effort by all stakeholders (discussed below).

7.2.6 The Need For A Collaborative Approach

Falconbridge and the Raglan Project

At its Raglan project in northern Quebec, Falconbridge and community leaders prepared a cooperative work strategy to address the low supply of local job-ready employees and the need to develop training programs and educational initiatives for Inuit still in school.

In partnership with the Kativik regional government (its school board and employment and training committee), Falconbridge is involved in a joint training effort, which includes academic upgrading, languages, orientation and safety, common core mining skills, operations and maintenance, and trades leading to certification programs. To improve the relatively low anticipated future supply of local job-ready labour, Falconbridge has sponsored incentives for Inuit children to receive mining related educational programs in schools.

Source: Stelios Loizides and Janusz Zieminski, *Employment Prospects for Aboriginal People* (Ottawa: The Conference Board of Canada, 1998).

There is agreement on the need for a more collaborative approach to economic development involving all of the major players identified in Section 4.4.5. It is a partnership approach that recognises that no single organisation can play the lead role.

There are processes in place to address the need for collaboration. The Nunavut Senior Officials Working Group, comprised of senior officials from Indian and Northern Affairs Canada, the Government of Nunavut and Nunavut Tunngavik Incorporated, acts as a three-party forum in which organisational priorities are shared and opportunities for collaboration are identified and pursued. And the Minister of the Department of Sustainable Development established “The Ministers Forum on the Economy” in 1999 to provide an opportunity by all players to participate in economic planning in Nunavut.

Nevertheless, The Conference Board of Canada found that there is a lack of clarity and, at times, a lack of consensus on the role of each of the major players related to economic development. This can be problematic when faced with scarce resources: can steps be taken to better maximise Nunavut’s limited human and physical capital? Further collaboration will be required that involves setting specific objectives for action and moving beyond general agreement on common principles.

We also believe there is a need to involve the private sector in the preparation of an economic strategy and to recognise the contribution it can make to economic growth as well as broader developmental objectives (see box on Falconbridge).

7.2.7 The Identification of Achievable Objectives

With all newly established political jurisdictions come high expectations. Nunavut is no exception. It will be important that achievable objectives be identified along with the reassessment of existing ones.

On this note, some ambitious objectives set for Nunavut may need readjustment and a greater sense of realism. For example, notwithstanding the desire to utilise local people and ensure control of resources, consideration should be given to attracting external resources (e.g., skilled workers and foreign investors) to provide necessary expertise and capital—as in the case with most economies.

It has been recommended that the target of a representative level (85 percent) of Inuit employment within Government should be revised to reflect the proportion of the working-age Inuit population (50 per cent), because most of the Inuit population falls below the age of employment.[105] The target of a representative level of Inuit employment within Government will be difficult to achieve in the short to medium term. However, because such a large percentage of the Nunavut population is so young, if the target is linked to education and training opportunities for potential entrants, and steps are taken to ensure the public service is regarded by Inuit as a desirable career choice, these difficulties could be overcome. By adopting a more realistic approach the two senior levels of government will be able to recruit most of their employees from within Nunavut, and the economic impact anticipated by the authors of Article 23 can be achieved.

The desire to focus on economic development at the community level may need to be compromised with pursuing economic development at the territorial level. It may not be possible to distribute economic opportunities across the Territory. This has certainly been the case in southern Canada. It may be equally important to ensure options exist to support Nunavummiut to travel to other communities in Nunavut.

Tradeoffs will likely occur with some of these objectives. For example, the goal to establish a single time zone for the Territory was found to be unrealistic for some communities given that they conduct their business with southern communities that would be operating in a different time zone. In the end, compromises were made.

Government no doubt will continue to be a major player in Nunavut's economy. But this does not mean Nunavut should refrain from diversifying its economy. As shown in the previous chapter, the pace of growth in the government sector (all three levels) is expected to decelerate in several years' time. The development of other economic sectors must therefore be pursued. Government has an opportunity to influence

[105] Vertes, Connelly and Knott, p. 3-14.

attempts to diversify the economy.[106] Better information systems will serve as a valuable tool in defining and developing the most promising sectors.

7.3 Concluding Remarks

This economic outlook is very different from typical economic reports. Moreover, it goes much beyond the presentation of a 20-year economic forecast. All of the partners involved with this project, including The Conference Board of Canada, recognised the need to take such a comprehensive review of Nunavut's development. Economic figures can provide part of the picture but certainly not all, nor can they fully explain the dynamics behind Nunavut's economic performance including the importance of the land-based economy in the lives of many Inuit.

Consequently, the report attempted to provide an overview or explanation of Nunavut's socio-economic development looking at the four forms of capital (physical, human, natural and social and organisational). Although the picture is incomplete—due in part to a lack of data available—it nevertheless, is able to point to some key areas within each form of capital that require attention.

Linked to the four forms of capital are the three fundamental objectives for economies outlined in Chapter 3: life-sustenance, self-esteem, and freedom of choice. Work on the four forms of capital should be consistent with the achievement of these objectives.

People and jurisdictions around the world closely followed the establishment of Nunavut. Expectations for progress from both outside and within Nunavut have been high. But it is clear that Nunavut's development must begin with the basics by ensuring all of the necessary levels of capital are in place to foster economic development. Our 20-year economic forecast remains an optimistic one providing they are addressed. Ultimately, however, the people of Nunavut will need to decide what constitutes a high and sustainable quality of life and the kind of development they are willing to pursue to achieve their goals.

[106]Interestingly, when asked which industrial sectors were expected to grow the most, many key informants told us that this would depend on where government directed its spending.