2013 NUNAVUT ECONOMIC OUTLOOK

NUNAVUT'S NEXT CHALLENGE: TURNING GROWTH INTO PROSPERITY

Nunavut Economic Forum
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About Nunavut Economic Forum

The Nunavut Economic Forum is a broad group of member organisations developed to identify and share information on economic development activity in Nunavut. The primary focus for the organisation is to bring the members together to collaborate in the implementation of The Nunavut Economic Development Strategy, each within their own area of activity and expertise. Successful implementation of the Strategy depends on the actions of each of the stakeholders. Participation and collaboration are key components of progress.

Research for this report was conducted between July and November of 2013.

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1 NUNAVUT'S NEXT CHALLENGE: TURNING GROWTH INTO PROSPERITY

Key Highlights

- For the first time since its creation and after a decade of persistent investments in its foundation, Nunavut's economy is expanding in several areas. Turning this growth into prosperity for people and for communities is Nunavut's next great challenge.
- Growth over the next five years will likely be higher than any other jurisdiction in Canada when measured by GDP, but this statement hides important considerations.
- Not all regions within Nunavut will grow equally, and more work is needed to bring economic opportunities to more communities. Moreover, not all Nunavummiut will share in the benefits of this growth, and work is needed to enable greater participation.
- Today, Nunavut has enough jobs to employ most, if not all, Nunavummiut in the labour force. Understanding why so many remain unemployed and end up in a poverty situation means understanding the complexity within Nunavut's challenge of bringing prosperity to all Nunavummiut.

Nunavut has had some difficult economic times since becoming a territory. After benefiting from the influx of money to establish the territory's institutions of public government, Nunavummiut watched as their three operating mines closed and no other private sector opportunity emerged to take their place. But this is changing. After a decade of investing in its foundations, Nunavut's persistence is beginning to pay off. For the first time, Nunavut's economy is looking to perform up to its potential with opportunities for growth in resource development, fishing, tourism, Arctic research, and marine transportation. This economic success will bring jobs, money, and people to the territory. Making sure the new wealth and prosperity reaches all Nunavummiut is the single most important challenge for Nunavut today.

It is no secret that Nunavut is at an early stage of development and that it needs far better economic and social performance if it is to ever reach a level of wellbeing experienced by most Canadians. For this to occur all economic agents throughout Nunavut including all levels of government, Inuit organisations, the private and social sectors, and Nunavummiut themselves, will have to work together in a way that generates real development outcomes from the proceeds of economic growth. In other words, it must capture the wealth generated from economic growth and direct it towards the achievement of Nunavut's ultimate goal of a high and sustainable quality of life for all Nunavummiut.

This coordination amongst stakeholders requires a level of complexity not yet established in Nunavut. Signs of improvements can be found. For example, the number of Inuit working at the Meadowbank Gold Mine is far higher than what was ever achieved at the Lupin, Nanisivik, or Polaris mines. This achievement is not the result of a single investment or any one accomplishment but rather the culmination of many advances over many years in Nunavut's economic, social, and political performance.

But job tourists (people who visit Nunavut for short periods of time to participate in its economy, but who live elsewhere) still outnumber the officially unemployed Nunavummiut. An investigation into the impediments to employment exposes a long list of challenges associated with a deprivation of human capabilities, social inclusion, and financial freedom and with inefficient markets such as deep-rooted structural challenges in the labour market. Improvements are needed in education, health, housing, labour mobility, addictions, and crime reduction. All of these issues, in their current state, affect poverty, raise people's aversion to risk, and promote a type of welfare trap. The root causes of these issues, how they are connected to one another, and how to address them are at the heart of under-

standing development in Nunavut and establishing a way forward.

There can be no debate that economic growth is an important part of the answer. No one should argue otherwise. But it cannot simply be growth for the sake of it. Economic growth does not, by itself, provide the magic bullet that guarantees society will reach its goals. It must be made to do so. Policy, planning, coordination and cooperation are all very important.

The Nunavut Economic Development Strategy sets the territory's goal as a high and sustainable quality of life for all Nunavummiut. Progress towards this goal is examined in all its facets in this report. Particular attention is given to the current and future opportunities in Nunavut's economic sectors and to the state of financial wellbeing, human capabilities, social inclusion, and sustainability.

Critical to this analysis is the acceptance that GDP isn't necessarily the best measure when the goal is to understand how economic growth can become the means for development. Once the use of other metrics are accepted and fully incorporated into the analysis, the policy, planning, and integration of actions needed are more easily recognised.

In addition to the analysis of where Nunavut stands in its progress towards a high and sustainable quality of life, this year's Nunavut Economic Outlook begins an examination of the integration of Nunavut's efforts in development, looking for opportunities for innovation and adaptation that could help Nunavut achieve its ultimate goal.

2 INTRODUCTION AND PURPOSE OF REPORT

Key Highlights

- The 2013 Nunavut Economic Outlook was commissioned by the Nunavut Economic Forum and is the sixth in the series that began in 2001.
- The focus of these reports has been to measure the progress of Nunavummiut toward a high and sustainable quality of life.
- Beginning with the 2005 edition, the Nunavut Economic Outlook has also provided feedback on the implementation of the Nunavut Economic Development Strategy.
- This year's Outlook will help to inform the next Economic Development Strategy.

The 2013 Nunavut Economic Outlook is the sixth report in the series that began in 2001. Originally a joint effort between the Government of Nunavut, Nunavut Tunngavik Incorporated, and Indian and Northern Affairs Canada, the series is now commissioned by the Nunavut Economic Forum, a member organisation developed to identify and share information on economic development activities in Nunavut.

The Nunavut Economic Outlook offers readers a comprehensive look at economic and social development in Nunavut. It contributes to informed debate amongst the Territory's leaders, decision makers, and other stakeholders. Over the years, the Outlook has been instrumental in improving the knowledge and understanding of, and the approach to, development in Nunavut. As a series, these reports investigate the underlying social and economic trends in Nunavut and track the results of Nunavut's investments in wealth-generating capital over time. It depicts the challenges and opportunities associated with Nunavut's socio-economic performance and potential. Ultimately, the Nunavut Economic Outlook provides a report on the progress of Nunavummiut toward a high and sustainable quality of life—a goal that is achieved by more than just income and material wealth, but also by optimal levels of health and education, strong cultural identity and civic engagement, and by social, political, and economic freedoms.

2.1 SIVUMMUT IV AND THE NEXT NUNAVUT ECONOMIC DEVELOPMENT STRATEGY

In 2003, Nunavummiut gathered in Rankin Inlet to continue what Inuit call 'Sivummut', a process for establishing a strategy for moving forward on socio-economic development. The first meeting of its kind was in 1994 shortly after the signing of the Nunavut Land Claims Agreement. During the 2003 gathering, discussions spanned many topics, including how Nunavummiut would move forward on issues involving the Land, its People, its Communities, and its Economy. These discussions were later transcribed into the Nunavut Economic Development Strategy (the Strategy).

The Strategy is a comprehensive, holistic, and open approach to development. It has a ten-year time horizon and its recommendations established a new path of cooperation and coordination for organisations throughout Nunavut to work together in achieving success.

The end of the ten-year timeframe has arrived and technical discussions have taken place across Nunavut through a series of Roundtables in 2012 and 2013 as well as other consultative undertakings including Town Hall meetings, an on-line survey, and an invitation to make written submissions.[1]

The Nunavut Economic Forum is also currently planning a Sivummut IV Conference for 2014 that will seek input from a wide cross section of Nunavummiut on the vision and priorities for the future. Underpinning these discussions is the real progress of Nunavummiut and their expectations for the future. This overview is an important input into these discussions.

[1] Further information about the renewal process is available on the NEDS 2 website www.neds2.ca.

3 APPROACH AND METHODOLOGY

Key Highlights

- The approach established for the Nunavut Economic Outlook series goes beyond conventional economic measurements in order to understand the real and more meaningful progress of society.
- The framework that has been used to understand and measure development in Nunavut since the original Outlook was published in 2001 is revisited in this year's edition.
- Much has been learned about development over the past decade, what it means, and how it can be achieved. These modern concepts of development are introduced and incorporated in this year's research.
- The development of people remains at the forefront of the analysis, as does society's goal of a high and sustainable quality of life. What changes with the updated framework is greater emphasis on the *process* of achieving this end.

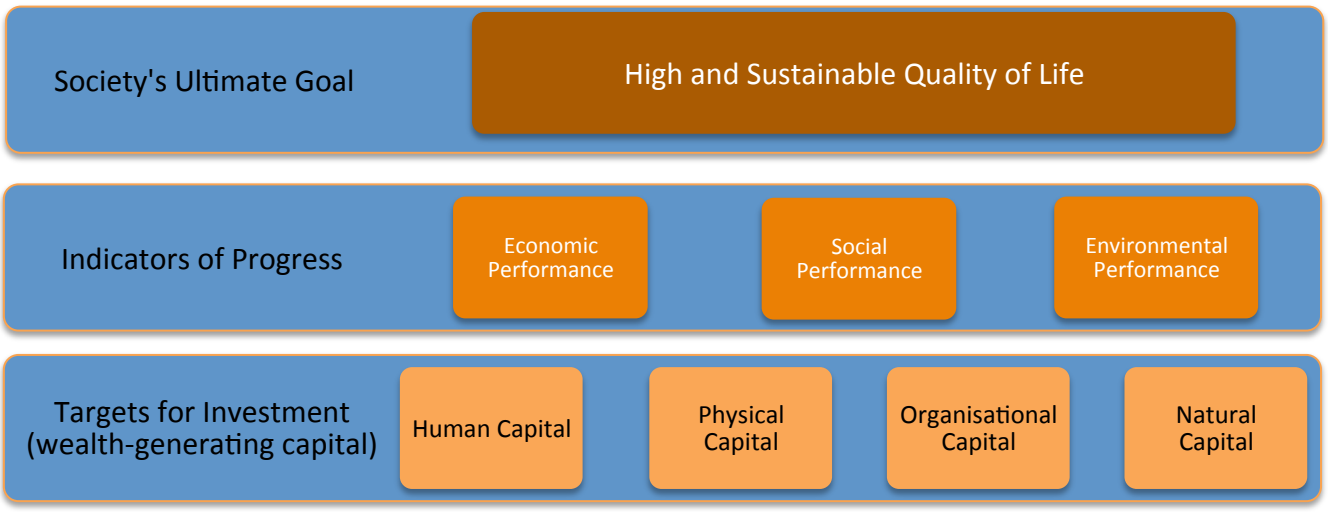
The Nunavut Economic Outlook is a comprehensive investigation into the socio-economic and environmental performance and potential of Nunavut and Nunavummiut. The original report established a *Framework for Understanding Economic Development* that was adapted from the United Nations' Framework for Developing Economies (see Exhibit 3-1).

This Framework focussed on the growth and development of society with the idea that one must look beyond conventional economic statistics to understand progress in a real and meaningful way. Rather than reporting gross domestic product (GDP) as the quintessential indicator of success, it looks at how a society defines its high and sustainable quality of life and establishes that definition as the ultimate goal.

The original Framework identifies four forms of wealth-generating capital, namely human, organisational, natural,

Exhibit 3-1

Original Framework for Understanding Economic Development in Nunavut



Source: Nunavut Economic Outlook

and physical, as areas for investment in order to improve economic, social, and environmental performance. At its root, the Framework is about correctly differentiating inputs, outputs, and outcomes and understanding how investments are linked to society's goals.

This approach was a perfect choice for Nunavut in 1999. It proved extremely useful

- in communicating the change in paradigm from a focus on growth to a focus on development,
- in coordinating investment strategies,
- clarifying roles across multiple stakeholders, and
- in establishing a relatively simple tool for tracking and measuring progress.

The Nunavut Economic Development Strategy and several government sector strategies later adopted this Framework.

> The original Framework for Understanding Economic Development in Nunavut was useful in communicating the change in paradigm from a focus on growth to a focus on development.

However, after more than a decade of implementation, some flaws in the Framework have been observed. Perhaps most important, Nunavut's progress toward a high and sustainable quality of life has been sporadic, and at times, non-existent. The Framework is not to be blamed for this result, but nor can it be said that it has helped Nunavummiut fully understand why, when, or where its system is failing. The complexities associated with linking growth with development are not adequately addressed. Without these insights, corrective actions are slow to materialise, ineffectual, or not taken.

The main principles of the Framework are that all economic, social, and political systems are working together to a shared end goal and that balance between economic, social, and environmental performance is a necessary condition for achieving that goal. But in the case where an imbalance appears, the framework provides no clear direction for the kinds of corrective actions that are needed.

This has been the case in Nunavut over the past five years with the rise in economic activities associated with natural resources and a relatively unchanged situation in areas such as public housing, social cohesion, crime, food insecurity, and poverty. It is true that some of these issues are now receiving attention. The Feeding My Family movement, the *GN Family Violence Strategy*, the *GN Long-Term Comprehensive Housing and Homelessness Strategy*, and the Nunavut Roundtable for Poverty Reduction's *Makimaniq Plan* have appeared in the past 2 to 3 years. But it is also true that these issues did not receive attention until well after the economic expansion was underway and not until they were seen as potential impediments to that growth. It suggests that growth has been given priority over development when research for this year's Outlook is indicating the opposite should be applied—that development should be the priority.

Modern economic research is showing that the connections between economic and social forces are far more complex than once thought and must be addressed in a more direct manner than what was used in the original Framework (Harford 2011). In Nunavut, it has been too easy to ignore the poor social performance, and instead focus on the rise in economic growth.

We should not grow the economy for the sake of it. There must be a greater purpose. This year's Nunavut Economic Outlook introduces a new Framework for Development. It remains rooted in the idea that quality of life is the ultimate measure of progress and that a vibrant economy is a necessary condition for a high and sustainable quality of life. However, it is not a sufficient condition for achieving this goal. A new Framework must better demonstrate the complexity of the modern economy in order to prevent growth in output from being viewed in complete isolation from other aspects of Nunavut's progress.

3.1 UNDERSTANDING NUNAVUT'S DEVELOPMENT CHALLENGE

A fully developed economy is one where its players are well and truly integrated into a system that has formed around the idea of improving wellbeing. With that complex system, a rise in economic activity, as measured by GDP, *can* be a signal that prosperity is improving and that people's lives will be better. This is because the higher GDP typically includes increased wages and salaries (remember that GDP is a measure of economic activity that sums wages and salaries, depreciation, indirect taxes, and profits). The new and higher wages are passed onto the labour market where new people enter the workforce and the overall income of the population improves. This collective rise in personal income affords people an expanded array of consumer choices, including more numerous and better quality goods and services, more choices in education, opportunities for a healthier diet and lifestyle, the option to take a vacation, to work less, or to save more.

This is how the system in Canada is supposed to work, and how it should work in Nunavut. But herein lies the challenge. It doesn't. In Nunavut, the connection between GDP and wellbeing is weak and is actually severed in places.

Consider some of the issues that inhibit the participation of Nunavummiut in their own economy and that plague Nunavut's development:

- Low levels of education, graduation rates, and literacy
- Poor health and unhealthy diets
- High dependence on income support and social housing
- High rates of substance abuse, violence, and suicide
- Growing rates of poverty and food insecurity

Put into the context of understanding Nunavut's development, this weak relationship between growth and development means promoting economic expansion as a means to improving wellbeing may not work as well as it should. For what its worth, Nunavut already has a GDP per capita rivalling that of other Canadian jurisdictions (see *Figure 3-1*). For Nunavut to develop into a modern economy it must establish linkages that ensure its economy, today and in the future, is the means to achieving real and positive consequences for the citizens of Nunavut.

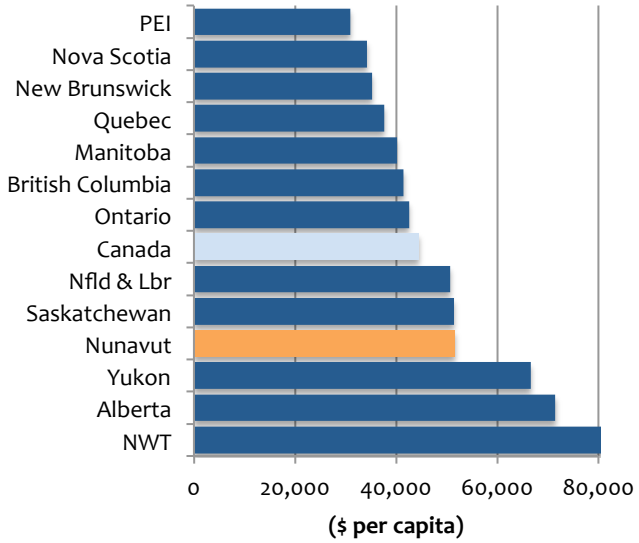
In this report, the breakdown between economic growth and human development is expressed as a challenge facing developing regions. However, there are signs that it is a challenge for fully developed economies as well. For example, there is growing concern that rising income inequality and stagnating middle-class family incomes experienced throughout OECD countries are evidence that this system is not working as it should. These issues are discussed later in the Outlook because they should influence how Nunavut approaches its own development.

3.2 NEW APPROACH TO MEASURING PROGRESS

The idea that wellbeing should be society's goal was studied extensively throughout the 1990s. In 1999 Amartya Sen wrote the book *Development as Freedom* (Sen 1999). This work became a watershed in bringing modern concepts of development into mainstream economic thought. Sen argued that development must be judged by its impact on people, not only by changes in their income but more generally in terms of their choices, capabilities, and freedoms; and we should be concerned with the distribution of these improvements, not just the simple average for a society (Barder 2012).

Figure 3-1

Real GDP per capita, Provinces and Territories, 2012



Source: Statistics Canada, CANSIM Table 051-0001 & 384-0038.

In using Sen's concept of development, the ultimate goal for a society is the freedom to live a life fulfilled, to have choices, to have the capabilities necessary to make those choices, and to have the social connections that ensure one's voice is included when choices are being made for you. To turn these concepts into tangible measures, they can be described as the freedoms associated with financial resources, human capabilities, and social inclusion.

It is no coincidence that these are the same measures used when defining poverty. The United Nations' Committee on Economic, Social and Cultural Rights defines poverty as:

A human condition characterized by sustained or chronic deprivation of resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other cultural, economic, political and social rights (United Nations Committee on Economic, Social and Cultural Rights 2001).

Having poverty and development use the same measures creates a seamless analysis of progress from a position of deprivation right through to a position of abundance. Defining development goals and measuring development outcomes needn't change because of where Nunavummiut are along the spectrum of development from poverty to

In 2007, the European Commission, European Parliament, Club of Rome, Organization for Economic Co-operation and Development, and World Wildlife Federation held a conference "Beyond GDP" to discuss how to better measure progress (European Commission 2007). This was followed in 2009 by a second conference "GDP and Beyond, Measuring Progress in a Changing World (The Commission to the Council and the European Parliament 2009)." In 2008, then French President Nicolas Sarkozy asked some of the world's leading economists and social scientists, including Joseph Stiglitz, Jean Paul Fitoussi, and Sen to create a commission now known as the *Commission on the Measurement of Economic Performance and Social Progress* (Institute of Development Studies 2008). Its purpose was:

- to identify the limits of GDP as an indicator of economic performance and social progress, including the problems with its measurement;
- to consider what additional information might be required for the production of more relevant indicators of social progress;
- to assess the feasibility of alternative measurement tools; and,
- to discuss how to present the statistical information in an appropriate way.

The Commission published its findings in a report in September 2009 (Commission on the Measurement of Economic Performance and Social Progress 2009). It reflects upon the inadequacy of current measures of economic performance and how measures of development could take better account of societal wellbeing. The prominent message is that there is a need 'to shift emphasis from measuring economic production to measuring people's wellbeing and to do so while accounting for issues of sustainability.'

There are now many alternative approaches to measuring development. The Organisation for Economic Cooperation and Development (OECD) has developed a Better Life Index, Great Britain surveys its citizens to determine the nation's Happiness Index, and in Canada there is ongoing work to establish a Canadian Index of Wellbeing. In all cases the goal is the same—to find a measure of development that could compliment or perhaps even supplant GDP as the primary measure of society's progress.

prosperity. In all cases, society's progress should be measured according to indicators that help us to determine whether people's lives are improving, that they have a high and sustainable quality of life, and are happy.

In this year's Outlook, rather than looking into Nunavut's investments into the four forms of capital, the research will focus on the development of Nunavummiut in terms of financial wellbeing, human capabilities, social inclusion, and sustainability. Long-time readers of the Outlook series will quickly recognise that this change does not alter the content of the report so much as it realigns the analysis in order to better connect Nunavut's quality of life inputs, outputs, and outcomes. These four measures of development can be described as follows:

3.2.1 Financial Wellbeing

The concept of freedom has close ties with that of financial wellbeing—having the financial resources to live a life fulfilled. Gaining greater freedoms is one of the truly tangible benefits or consequences of economic growth. But we cannot forget that this freedom extends beyond what an individual can place in their shopping cart. Financial wellbeing affords consumers a broad array of consumer, social, and political choices. In that sense, the freedom to make these choices associated with financial resources can affect and is affected by human capabilities, social inclusion, and sustainability. Past Outlooks would have included this analysis in three different places, Human Capital, Nunavut's Wage Economy, and as a part of the Economic Forecast.

3.2.2 Human Capabilities

Human capabilities are those factors that allow individuals to live lives that are valued, something that is often determined by decision making and critical thinking and that affect one's ability to transform their own resources into improvements in quality of life. Education, health, literacy, and lifelong learning are the most obvious factors. To have strong capabilities is to have the ability to make sound decisions, to have the physical, social, and mental assets needed to follow through with those decisions, and to understand and adapt to changes. The modern concept of resilience in the study of development is closely connected with human capabilities. Because the quality of shelter has such a strong bearing on one's capabilities, it is discussed within this measure of development. In previous Outlooks, the analysis of human capabilities was included in the sections discussing Human Capital and Physical Capital.

3.2.3 Social Inclusion

Social inclusion is a complex concept with many different elements. It can be described as the strength of connection between people, community, government, and institutions. Some would call this the social fabric of a community and would draw a direct link between it and the concepts of social cohesion and trust.

Some find it easier to understand social inclusion as being the opposite of social exclusion, which is the process of marginalization through barriers to participation in economic, political, civic or cultural life.

Social inclusion is relevant at all levels of society. For example, success for small non-government organisations depends on a close association with government and, increasingly, with industry. At the broadest level, cohesion exemplified by trust and collaboration between the Government of Nunavut, Nunavut Tunngavik Incorporated, industry associations, and other non-profit interest groups is needed to create and implement and test processes aimed at improving the development of the territory; that is, inclusion is an essential element in creating a complex system of development that is adaptive and innovative.

Social inclusion was described as part of Organisational Capital in previous Outlooks.

3.2.4 Sustainability

The Commission on the Measurement of Economic Performance and Social Progress recommends that sustainability be included in any measure of development. Development as sustainability is relatively easy to understand conceptually, but is a challenge to quantify on its own or within an index.

The use of GDP as a measure of progress does a poor job in valuing sustainability. This is because the free market places little to no value on future stocks. Through government intervention, and more slowly through greater consideration of environmental degradation, some industries and firms are adjusting their own inputs, pricing, profit margins, and investments to reflect these costs, which then become embedded in the GDP equation.

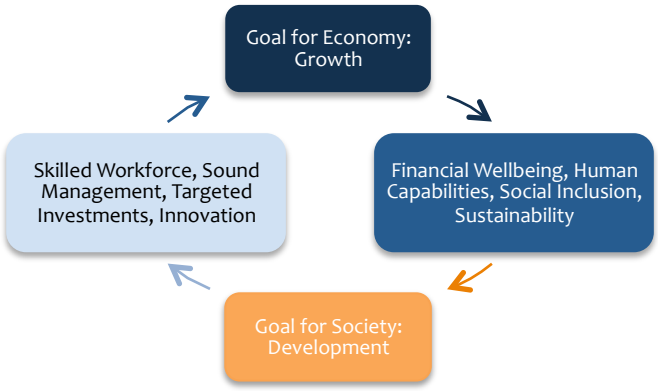
In addition to including sustainability with the other measures of Nunavut's development, a separate chapter is dedicated to sustainability in terms of the preservation of Inuit culture and traditional economic activities. Sustainability takes on an element of preservation that can be measured through the level of activity and access to traditional pursuits. A collapse of subsistence activities would be catastrophic, affecting financial and social elements of Inuit quality of life, and adding to the depth of poverty in some communities.

3.3 FROM MEASUREMENT TO ACTION

The Nunavut Economic Outlook is principally a tool for understanding and measuring development in Nunavut. As such, there are no policy recommendations associated with its findings. Nevertheless, there is an opportunity with the new Framework to go beyond measurement to investigate how development is achieved.

How does society develop into a state that is oriented towards greater freedoms, capacity, and inclusion? Economists once thought that this could be accomplished through economic growth and set about finding mechanisms to increase production. Early growth theory said it was a function of capital and labour and nothing else.[2] If you wanted progress, you need only invest in those two things. But with the shift in focus towards development as the ultimate goal, the decisions on how to distribute society's limited resources are far more complex. A broad set of social and environmental needs must be addressed in addition to the needs of the economy.

The challenges in improving labour force capacity and raising the overall stock of capital are equalled by the need for better public and non-government institutions, stronger private sector development, improved politics, more foreign direct investment, better public policies and leadership, and greater social inclusion and civic engagement (Barder 2012). There is not one thing that, through focussed investment on it alone, will set in motion a cycle of economic growth and development. This implies that far greater coordination amongst all stakeholders will be needed because there will



[2] Labour and capital were the only variables included in the Harrod-Domar Model for economic growth. In the 1950s, Robert Solow added a technology variable to the equation, which became known as the Solow Model.

be many opinions on how and where investments and actions are required.

To that end, it can be argued that development is only truly achieved when the *system* in place (again, defined as the interaction of society's people, labour force, communities, government at all levels, public and non-profit institutions, and private sector) functions in a way that can generate and sustain the greater choices, capacity, and freedoms that make up our definition of development. Development, then, is not simply the achievement of some great end where people's lives are better and they are happier; but rather, it is a state where the system in place is capable of perpetuating a self-sustaining movement towards this end. This is an argument that says *how* society achieves greater wellbeing is just as important as whether or not the greater wellbeing is achieved at all.

> *Development is a system wide manifestation of the way that people, firms, technologies, and institutions interact with each other within the economic, social, and political system (Barder 2012).*

This self-sustaining cycle of development is not achieved simply by promoting a new framework with a focus on development outcomes. Agents within the system must change the way they operate. And, how they change cannot be based simply on what works elsewhere. Engineering a successful solution in this manner has proven to be incredibly difficult. International efforts in reforming developing countries show how few successes there have been with this approach. Instead, any adaptation or innovation should be based on whatever returns better results. Best fit replaces best practice (Booth 2011). This means that all the components within the system—the people, labour force, government, private sector, communities, and public and non-government institutions—must be allowed (even encouraged) to adapt and evolve through results-based experimentation.

Some will take this to imply a focus on institutional reform—what was called investments in Organisational Capital under the original Framework. This is certainly a part of the solution, but development is more comprehensive. Greater inclusion, social cohesion, and trust within and between institutions (whether public, private, or non-profit) are important parts of what makes systems successful. But a complete solution also deals with the education, skills, knowledge, understanding, and capabilities of all agents within the system and with a certain acceptance of, if not a consensus on, the vision, values, culture, goals, and aspirations of society.

Systems throughout the world that have been successful in advancing human development are extremely complex but are not necessarily complicated (Barder 2012). Their complexity is found in the complete integration and orientation towards development goals. The integration removes a lot of the complications that arise otherwise when multiple organisations or agents attempt to work together but have different end goals and are using different metrics. In the simplest of terms, successful regions have integrated all of its components making them better able to generate real, positive consequences for society's development from the investment dollars entering the region and from the growth in its economy.

> One could make an argument that at least some of the challenges faced by the Government of Nunavut, as described in *Qanukkanniq? The GN Report Card,* are the result of adopting the systems of the Government of the Northwest Territories at the time of division. The systems of administration in place throughout Nunavut look correct, but they don't always function as they should or to the expectations of Nunavummiut. This has been described as *isomorphic mimicry,* where institutional forms that work in fully developed regions are transplanted into environments where those institutions don't work at all (Pritchett 2011). To achieve real and sustained development, Nunavut will need its own system, adapted from what and how things work best in Nunavut, and not based on how they work in Yellowknife or Ottawa.

These concepts might seem too theoretical to be useful in practical terms. But the basis for this theory is the idea that there isn't a simple, replicable prescription for development, and thus, describing the new Framework is not so simple as was previously thought. Development is a process specific to a region, and so it will have characteristics unique to the society in which it is applied. If past efforts to support economic development in that region have not addressed complexity and innovation, many steps will be needed to move that region from its current state of development to one that is more advanced.

This is Nunavut's challenge—to turn its newfound economic growth into real prosperity and wellbeing for all Nunavummiut. In this report, we investigate how Nunavut is performing and positioned to meet with this challenge.

4 NUNAVUT DEMOGRAPHICS

Key Highlights

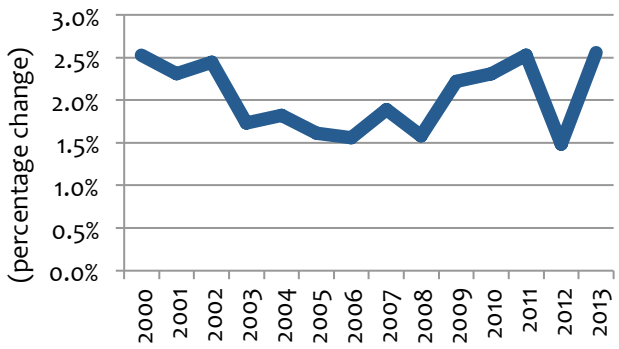
- Nunavut's population has grown to 35,591 as of July 1st, 2013.
- Growth has come from high fertility rates and, more recently, from positive net interprovincial migration.
- It is not clear what path these variables will take in the future. Will resource development have a positive impact on interprovincial migration, causing an increase in population growth? Will fertility rates amongst teenagers and young adults decrease? And if so, when?
- Different growth scenarios were tested with the results showing a population growth by as little as 9,800 to as much as 14,400 over the next 20 years. In all cases, the rate of growth amongst residents aged 60 is higher than any other cohort, climbing from 2,370 to over 5,000.

4.1 POPULATION DYNAMICS

Nunavut's population was 35,591 as of July 1st, 2013. This marks the fourth year in the past five that population growth exceeded 2 per cent (see **Figure 4-1**).

Figure 4-1

Population Growth, Nunavut, 1999 to 2009



Source: Statistics Canada, CANSIM Tables 051-0001.

In the autumn of 2013, Statistics Canada used the results from the 2011 Census as the basis for major revisions to its estimates of population for Nunavut. Previously, the 2013 population estimate was 34,023. The new estimate is 35,591, 4.6 per cent higher than before. The new number requires changes to important assumptions about how Nunavut is growing—the most important being that Nunavut's population has been growing faster than was thought.

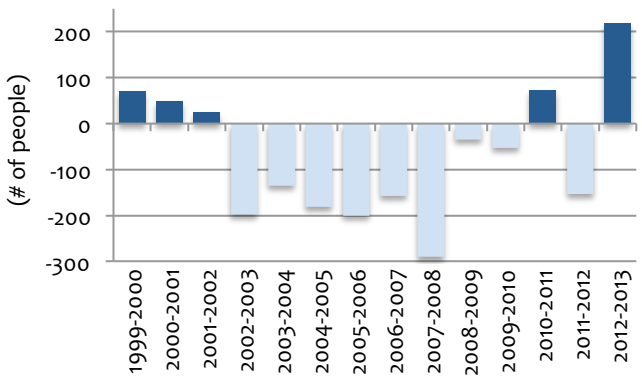
4.1.1 Migration

This rise in the population growth rate can be attributable to a change in migration patterns. For years, net interprovincial migration has been negative, meaning more residents leave Nunavut each year than enter. From 2002-03 to 2007-08, the imbalance averaged 193. Starting in 2008-09, a date that corresponds with the start of Nunavut's current growth cycle, migration patterns began to shift and have been positive in two of the last three years (see *Figure 4-2*).

This change in migration patterns should be studied closely to learn whether it is the start of a trend or simply an anomaly. For example, results from the *2011 National Household Survey* revealed that an increasing number of Inuit are moving away from their traditional territory—approximately

Figure 4-2

Net Interprovincial Migration, Nunavut, 1999-00 to 2012-13



Source: Statistics Canada, CANSIM Table 051-0004.

Table 4-1

Inuit living outside Inuit Nunangat including largest Inuit communities, 2006 and 2011		
	2006	2011
All Inuit in Canada	50,485	59,545
All Inuit outside Inuit Nunangat	11,005	16,000
(per cent living outside Inuit Nunangat)	21.2%	26.9%
Edmonton	590	1,115
Montreal	570	900
Ottawa-Gatineau (Ontario side)	645	735
Yellowknife	640	735
St. John's	280	680

Source: 2006 Census of Population, Aboriginal Peoples Survey; 2011 National Household Survey

5,000 more Inuit now live outside Inuit Nunangat[3] compared to 2006 (Statistics Canada 2013) (see *Table 4-1*).[4]

Specific migration data for Nunavut are available by age cohort (see *Table 4-2*). There appears to be a trend across some but not all age groups. For example, more children aged 0 to 4, 15 to 19, and adults aged 30 to 34 and 55 and older leave the territory every year on net, while adults aged 20 to 24 and 50 to 54 move to Nunavut in greater numbers than move away. This hints at a movement of young families, graduating students, and retiring adults away from the territory, while young adults and adults and families with older children are more likely to move to Nunavut.

Table 4-2

Net Migration by Age Cohort, Nunavut, 2007 to 2012						
	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	5-year average
0 to 4	-99	-41	-74	-36	-112	-72
5 to 9	2	-2	0	10	-8	0
10 to 14	16	15	19	21	18	18
15 to 19	-53	-27	-48	-35	-87	-50
20 to 24	22	37	24	46	7	27
25 to 29	-49	5	16	58	-38	-2
30 to 34	-91	-36	-8	-6	-54	-39
35 to 39	-45	-11	-2	10	-14	-12
40 to 44	-51	-16	-1	10	-24	-16
45 to 49	18	20	30	13	-30	10
50 to 54	39	59	39	46	-8	35
55 to 59	-38	-34	-47	-43	-95	-51
60 to 64	-14	-17	-22	-12	-39	-21
65+	-4	-10	-2	-12	-29	-11

Source: Statistics Canada, Demography Division, Data prepared by Nunavut Bureau of Statistics.

> Is the change in migration patterns the start of a new trend or just an anomaly?

There have been no studies looking at why people leave Nunavut, and in particular, why Inuit leave. This knowledge would make it possible for government to consider policy options to reduce the outflow. For example, it is unknown whether and to what degree issues related to health, education, housing, safety, cost of living, economic opportunity or climate are causing people, especially young families, to leave. Similarly, the inflow of young adults and late-middle aged adults would seem to be a function of job opportunities, but we don't know if there are other factors.

Looking at this issue from another direction, one might ask: What is Nunavut doing to keep people in the Territory? Are Nunavut's communities desirable places to live, work, and raise a family? Do newcomers feel welcome? Do people feel safe?

These are questions about social cohesion, trust, and spirit of communities as much as they are about government services, infrastructure, and policing. Migration has a significant impact on the territory's population, its labour force, and on the transfers Nunavut receives from the federal government. It is an issue that should be better understood.

4.1.2 Fertility Rates

Despite the usual outflow of residents, Nunavut's population grows every year at an average increase of about 625 people. There are 8,770 more Nunavummiut in 2013 than there were in 1999—a 33 per cent increase. The primary reason for this growth is the fertility rates amongst Nunavut women.

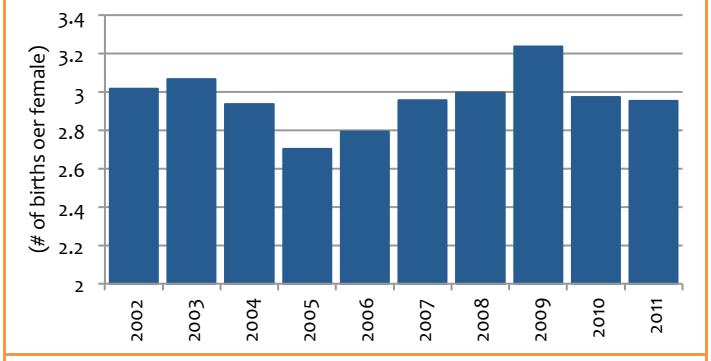
> There are 8,770 more Nunavummiut in 2013 than there were in 1999—a 33 per cent increase.

Long predicted to decline, Nunavut's fertility rates have shown no signs of downward movement over the past decade, estimated to equal 2.97 in 2011 (see *Figure 4-3*). This is almost twice the rate for all of Canada at 1.61 (Statistics Canada 2013).

[3] Inuit Nunangat refers to Inuit and Inuvialuit jurisdictions, including Inuvialuit Settlement Region, Nunavut, Nunavik, and Nunatsiavut.
[4] This includes Inuit and Inuvialuit from throughout Inuit Nunangat, of which Inuit from Nunavut make up the largest share at 45.5 per cent.

Figure 4-3

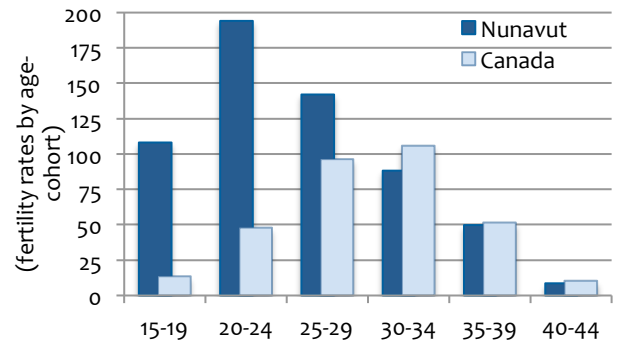
Fertility Rates, Nunavut, 2002 to 2011



Source: Statistics Canada, CANSIM Table 102-4505.

Figure 4-4

Age-Specific Fertility Rates, Nunavut and Canada, 2011



Source: Statistics Canada, CANSIM Table 102-4505.

The greatest discrepancy with the average Canadian female is found in teenagers and young adults (see *Figure 4-4*). These data show that for every 1,000 females in Nunavut aged 15 to 19, there will be 108 births—that is, 1 in 10 teenage girls will have a child before turning 20. Across Canada, that ratio is closer to 1 in 100. For females aged 20 to 24, the rate almost doubles in Nunavut to 193—almost 2 in 10 females in this age group will have a child.

Fertility rate refers to the number of children that a hypothetical female would have over the course of her reproductive life if she experienced the age-specific fertility rates observed in a given calendar year (Statistics Canada 2012).

The implications of these fertility rates amongst young Nunavummiut women are far reaching. Teenage pregnancies can result in women dropping out of school or not pursuing further education. Their immediate needs turn to parenting and household finances. These women face the very real possibility of becoming dependent on social assistance and public housing—a situation that could last a lifetime. Perhaps most disconcerting is the likelihood of the children being raised in poverty. Other issues relate to the need for day care services, early childhood development programs, and educational services.

4.1.3 Nunavut's Ageing Population

Figure 4-5 shows the number of babies born each year in Nunavut. In 2008, this number went above 800 for the first time in history and was 837 in 2011. The ever increasing newborns are creating a population scenario whereby the number of girls aged 0 to 14 outnumber those aged 15 to 29 (see *Figure 4-6*). When combined with the fertility rates of teenagers and young women, the number of births each year is certain to remain above 800 for the foreseeable future and will continue to rise unless those rates come down.

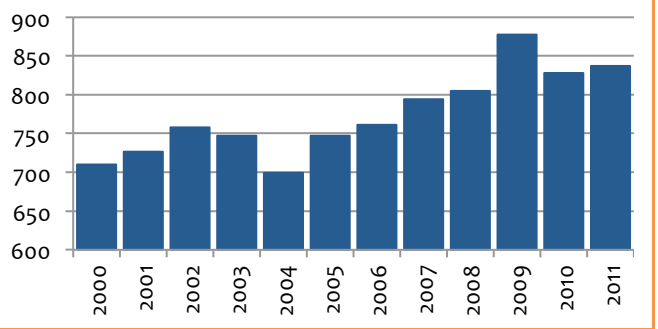
Children will continue to dominate Nunavut's population profile for several decades, but there is a more profound demographic change that is taking place. The number of Nunavummiut aged 60 and over is growing faster than any other segment of the population. From 1999 to 2013, this group increased by 112 per cent. There are now 1,170 more Nunavummiut in this age range than there were in 1999.

The impact on health and social services including the cost of long-term care has not been calculated but it will be significant, and will require proactive and innovative planning on the part of government.

From 1999 to 2013, the number of elders and senior citizens living in Nunavut increased by 112 per cent.

Figure 4-5

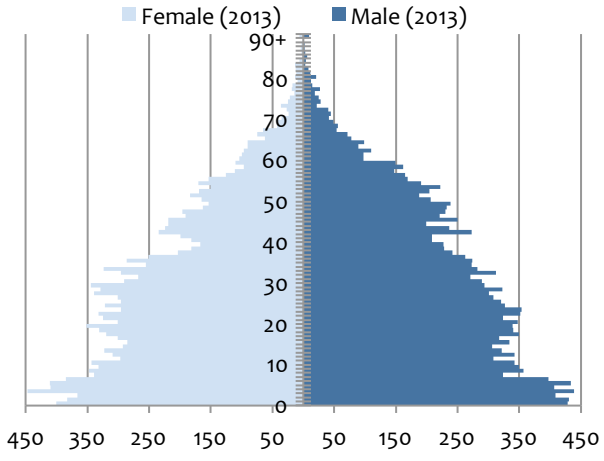
New-borns, Nunavut, 1999 to 2009



Source: Statistics Canada, CANSIM Tables 102-4503.

Figure 4-6

Distribution of Population, Nunavut, By Single Age Cohort, 2013



Source: Statistics Canada, CANSIM 051-0001

4.2 DEMOGRAPHIC PROJECTIONS

Understanding demographic trends is perhaps the most critical element of any economic forecast. Knowing the size and make-up of future populations provides valuable information for planning, policy, and investment decisions.

4.2.1 Inter-Provincial Migration

Long-range demographic projections for Nunavut are made challenging by two factors. The first is the role of inter-provincial migration. It has tended to be negative (more out migrants than in migrants) across Nunavut for the past decade and a half, but has just risen above zero with more in migrants than out migrants. The question is where will it go in the future?

Arguments can be made that Nunavut's growing resource-driven economy will create an environment that attracts more people and at the very least brings net migration to zero. Nunavummiut who have previously migrated elsewhere would have an incentive to return home, young Nunavummiut who are finishing school would have a lower likelihood of leaving, and some new people from outside the territory looking for employment will choose to move to Nunavut. Over time, these incoming people will offset the out migration that is occurring elsewhere in the territory.

This assumption makes sense but there are examples where the outcome has been different. For instance, Baker Lake has not experienced significant in-migration from other parts of Canada as a result of the Meadowbank Gold Mine. In their case, most of the migration has come from within Nunavut (intra-migration). For the handful of non-Inuit that did move to the community as a direct result of the mine development, few would expect them to remain there once the mine closes.

In the Environmental Impact Statement submitted by Baffinland Iron Mines, the proponent stated population effects would not be significant for its project (Baffinland Iron Mines Corporation 2012). This statement was made based on an investigation into the full project with construction costs exceeding $4 billion and an operational workforce of 950. That project has since been replaced by one that is approximately 80 per cent smaller, which would suggest impacts such as migration would be less than what was originally predicted.

> *The potential for the Project to cause non-Inuit migration into communities, as well as the potential for Inuit to move out of the communities as a result of the Project was assessed. Neither of these possibilities is identified as significantly affecting the composition and numbers of the North Baffin populations or the community social fabric* (Baffinland Iron Mines Corporation 2012).

Rankin Inlet's experience with the Meliadine Gold Project might be a little different because that community is larger, with more amenities, has a larger and more established business community, and is somewhat less isolated being a transportation hub. These factors could make it a more attractive and more permanent destination for Nunavummiut and non-Nunavummiut alike.

> In the Draft Environmental Impact Statement submitted by Agnico-Eagle Mines for its Meliadine Gold Project, the company states that the population of Rankin Inlet would be most affected by returning family members who have previously migrated away from the community (Agnico-Eagle Mines 2012).

The challenges in linking resource development projects with migration are two-fold. First, mines in Nunavut employ a two-week, fly in/fly out rotation with their workforce, making residency unnecessary for many of the direct and indirect jobs that are created. Anyone wishing to remain in his or her home community but work at one of these mines will be able to do so. For example, Baffinland is flying employees to the Mary River site direct from Waterloo, Ontario. And second, in-migration is typically viewed as a negative outcome of resource development by impacted communities.

This causes developers to take extra steps in their project's design to prevent migration.

Unless jobs are created that require residency and for which the required skills are not present within the existing labour force, a larger economy does not necessarily mean increased in-migration. This is the case for the Canadian High Arctic Research Station (CHARS) being constructed in Cambridge Bay. This project is expected to create 60 new jobs for people working in the sciences who will have to move to Cambridge Bay. Some will bring their families and the added income and activity in the community could create further business opportunities, meaning the community's population could grow even more.

Working against an assumption that net migration will rise above zero is the historical evidence that shows that this seldom happens. As shown earlier, the more common result has been that more people leave the territory each year than arrive. This trend has persisted even in years when economic growth was high—the exceptions being last year (2012-13) when 218 people moved to the territory and in 2010-11 when 73 people moved in (on net).

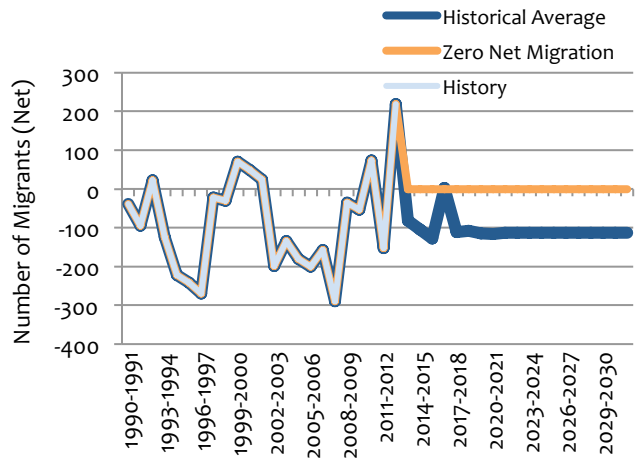
There are social issues that might be causing people to leave and would cause hesitation in potential in-migrants. As already mentioned, there is no evidence to prove this is the case, but the lack of suitable housing and underperforming education and health services could be factors in peoples' residency decisions. Families might choose to leave because of the absence of appropriate childcare, to be closer to other family members, or because of the cost of living. Such reasons were given in a survey of mine employees in the NWT (NWT Bureau of Statistics 2009). Similar to ageing populations in other rural or remote jurisdictions, Nunavummiut might choose to leave as a part of their retirement plans or for medical reasons and a lack of continuing care facilities. These issues are not going to change over the short to medium term, so if they are in fact contributing to migration patterns, then we should expect Nunavummiut will continue to leave because of them.

For this year's Outlook, two migration scenarios were developed and studied using the Nunavut Demographic Model developed by Impact Economics. The first scenario sets net migration at zero for the entire forecast time period. The second scenario sets net migration at the historical average, with an exception made for CHARS start up in 2017 (see *Figure 4-7*).

4.2.2 Fertility Rates

Figure 4-7

Migration Scenarios, 2013 to 2032



Source: Statistics Canada, CANSIM Table 051-0004. Impact Economics.

The second factor that can make demographic projections difficult in Nunavut is correctly predicting changes in fertility rates. As mentioned, they have remained essentially unchanged over the past 10 years at around 3.0 children per female of child-rearing age. Leaving rates at this average would seem the easiest thing to do, but the general consensus has always been that they will eventually come down. Once they do, it is possible that they will come down in a hurry because the decline would surely come about as the result of a decline in pregnancies amongst teenagers and Nunavummiut in their early twenties. It is in these cohorts where the greatest discrepancy lies with the Canadian average and where the greatest impacts would be seen should fertility rates start falling.

If and when Inuit women place greater importance on education and a career, the result will be a postponement of marriage and children. Such a change would have an important effect on family and childhood poverty, and would also represent a significant cultural change.

The question is: When will this drop in fertility rates happen in Nunavut? There have been no signs of it yet, and in fact, recent years have seen increases in the rate of birth by women aged 15 to 24, which is exactly the age cohort where one would expect to see the biggest change, but in the opposite direction.

Choosing education and the workforce first before marriage and children is a social change that occurred in Canada beginning in the late 1970s and carried through to the late 1990s. The result was a rise in the average age of new mothers and a decrease in the average family size. The time period also saw an increasing number of Canadian women choosing to have no children at all.

The birth rate in some provinces, namely Quebec and British Columbia, dropped so low at the beginning of this Century that demographers were warning about the effects on future labour supply, the affordability of pay-as-you-go pension plans such as the CPP, and other labour-related tax collections. Some government responded by introducing child-rearing incentives similar to what was in place after the Second World War, just prior to Canada's Baby Boom.

While fertility rates have stopped their descent and even rebounded a little, however, the country is a long way from seeing another Baby Boom.

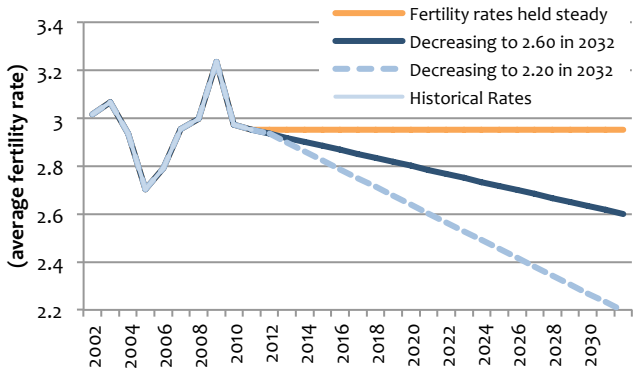
Three scenarios testing fertility rates have been created for this year's Outlook (see *Figure 4-8*). In the first scenario, fertility rates are held constant at their current levels. In the second scenario, rates gradually decrease from 3.0 in 2012 to 2.6 in 2032. In the third scenario, the rates decrease at a much quicker pace, dropping to 2.2 by 2032, with much of the decline coming in the 15 to 19 and 20 to 24 age categories.

4.2.3 Demographic projections and their implications

Combining the migration and fertility rate scenarios generates six different demographic projections. The results are provided in *Table 4-3*. Mortality rates were kept equal to their five-year average in all six scenarios, while the model adjusted the age of migrants based on historical trends.

Figure 4-8

Fertility Scenarios, 2013 to 2032



Source: Statistics Canada, CANSIM Tables 102-4503.

The scenarios produce a range of population projections, from an increase of 9,822 people over the 20-year time period, equal to 28 per cent (1.3% annually) and resulting in a population of 44,525, to an increase of 14,410 people, equal to 42 per cent (1.8% annually) and a population of 49,113.

The scenarios that combine historically negative net migration and decreasing fertility rates result in a manageable population from the perspective of public services, infrastructure, and housing—areas where Nunavut already faces considerable challenges. The scenarios where net migration is zero and fertility rates remain at or near where they are today produces a much larger population. This would mean higher transfers from the federal government (population is a key variable in the Territorial Formula Financing agreement) and eventually a larger workforce. But the strain would likely outweigh the benefits.

The number of Nunavummiut aged 60 years or older will rise dramatically regardless of the scenario. From its current level of 2,370, the number of people in this 60+ age cohort will rise above 5,000 by 2032 (see *Figure 4-9*). There are a few things that could slow this pace of growth, including an increased propensity to retire to southern Canada and a rise in the number of Nunavummiut moving to long-term care facilities in other parts of the country. In reality, both seem likely at this point. Nunavut does not currently have the facilities or programs to meet the medical needs of ageing Nunavummiut. Housing patients in southern Canada might be the only available option.

Table 4-3

Population Projection Scenarios, 2012 to 2032

	2013	2032	Net Change	% Change	Average Annual % Change
Historical Net Migration, Today's Fertility Rates	35,591	48,193	13,490	39%	1.7%
Historical Net Migration, Fertility Rates to 2.6 by 2032		45,765	11,062	32%	1.4%
Historical Net Migration, Fertility Rates to 2.2 by 2032		44,525	9,822	28%	1.3%
Zero Net Migration, Today's Fertility Rates		49,113	14,410	42%	1.8%
Zero Net Migration, Fertility Rates to 2.6 by 2032		48,023	13,320	38%	1.6%
Zero Net Migration, Fertility Rates to 2.2 by 2032		46,746	12,043	35%	1.5%

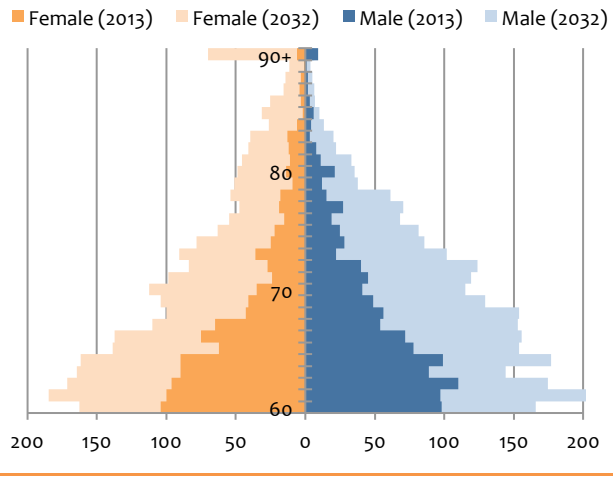
Source: Statistics Canada, Demography Division; Impact Economics.

There are many more questions that arise from studying population projections. For example, as the population in Nunavut rises, so will the pressure on country food resources such as caribou and char. Can existing herds sustain the dietary needs of another 9,800 people? What about another 14,400 people? Likely not, meaning the increased population, whether on the high or low end, will affect food consumption patterns in Nunavut and create new issues related to food security.

Perhaps the critical point here is to recognise that the population of Nunavut is growing at a pace quicker than once thought and it is ageing rapidly. Both trends represent challenges for the territory. Understanding these changes is necessary before they can be addressed effectively.

Figure 4-9

Distribution of Population Aged 60 and over, 2013 and 2032



Source: Statistics Canada; Impact Economics.

5 ECONOMIC CONDITIONS AND OPPORTUNITIES

Key Highlights

- Nunavut is set to embark on a prolonged period of economic growth. This growth comes after years of investing in the foundations of its economic sectors.
- Mining remains Nunavut's greatest hope for capital investment, job creation, and business opportunities. The Mary River project is now under construction, and the probability that Meliadine is developed remains high. Other projects will likely need better market conditions and higher prices if they are to move forward.
- Government is Nunavut's largest economic sector when including public administration, education, health, and defence. It is not likely to grow much in the coming years, but will benefit from one-time special purpose funding for such things as the construction and operation of CHARS, the $100 million transfer for public housing, the construction of the Nanisivik Naval Facility, and the Iqaluit International Airport project.
- Nunavut's fishery has, in relative terms, had more success in growth and development than any other sector in Nunavut's economy. Over the past ten years, it has seen substantial increases in its overall size—attributable to expanded allocation of allowable catch, has made considerable investments in machinery and equipment (Nunavummiut fishers now own 5 large offshore factory freezer vessels), has seen millions invested in training, and has dedicated the time and resources necessary to establish a strong industry voice when dealing with the federal government and other industry players.
- Tourism remains a sector with great potential for growth. A new tourism strategy was developed in 2013, combining the efforts of several industry representatives. Over the next several years, the tourism sector hopes to improve its products and services that will help to attract more visitors and increase the amount these visitors spend on non-travel related items. Interestingly, in 2011, more Nunavummiut were employed in the tourism sector than in the mining and construction sectors combined.
- The outlook for the construction sector is very good, with large developments coming in both the public and private sectors. The Mary River Iron Project is already under construction and Meliadine could be built in a few years under the right market conditions. The federal and territorial governments will pursue several large projects including the Canadian High Arctic Research Station in Cambridge Bay, the Nanisivik Naval Facility, and the Iqaluit International Airport.
- Production in the arts sector and cultural industries will likely shrink in the face of increased Inuit participation in the wage economy. This might ultimately prove to be a benefit to emerging and master artists, who would see a drop in the volume of lower quality work and increased attention to their work. For individuals wanting to make a career in the business, access to affordable work space and expanding their market are some of the more critical concerns.

5.2 OVERVIEW OF NUNAVUT'S ECONOMY

The Nunavut economy continues to show enormous promise, even if results remain modest in some areas.

- The mining sector receives the most attention because of the numerous projects that are inching closer to development and because it offers the potential to create thousands of jobs and employ hundreds of Nunavummiut. As of 2013, only the Meadowbank Gold Mine was in production with the Mary River Iron Project entering the initial stages of construction. No other mining proponent had acquired the licence to operate and the financing needed for development.
- The fishing industry also continues to show progress and will benefit from a recently announced increase to the turbot quota. Moreover, Inuit employment has improved in recent years, with as many as 200 Nunavummiut now working in the industry.
- Tourism remains an interesting and oft cited area for growth. The industry has its first strategy in over a decade and that should help focus and coordinate efforts in growing the industry.
- Government is the largest employer in Nunavut by a considerable margin, though not an area where growth should be expected over the long term. However, spending and employment should rise over the next few years as a result of increased federal support for housing, infrastructure, and the construction and operation of the Canadian High Arctic Research Station.
- The construction sector is driven by mining exploration and development and spending by government. As a result growth has been strong over the past few years.

This chapter presents the current conditions and future opportunities in the different sectors of the territory's economy. The analysis of how Nunavummiut will participate in and be affected by this economy forms the basis of Chapter 6.

5.3 MINING

5.3.1 Current Conditions

5.3.1.1 Mineral Production

The Meadowbank Gold Mine—which had just entered production when the last (2010) Nunavut Economic Outlook was written—remains the only operating mine in Nunavut. It is owned and operated by the Canadian miner, Agnico-Eagle Mines (AEM).

The mine is scheduled to remain open until 2018. It will produce approximately 358,000 ounces of gold annually over the next few years. Its staffing numbers have now stabilised and currently sit at approximately 675 with about 30 per cent of those employees being Inuit from the Kivalliq region.

Meadowbank Gold Mine: Quick Facts	
Mine Type	Open Pit
Estimated Mine Life	2010 to 2018
2012 Production	366,030 oz. gold
Contribution to real GDP	~$200 million
2012 Total Cash Cost	$913/oz. gold
Current Employment (2013:Q2)	678
Inuit Employment	~225

It is in this chapter (Chapter 5) that past Nunavut Economic Outlook's included statistical analysis and other research findings on the traditional or non-wage economy. Fifteen years ago, when writing the original Outlook, it was decided that the traditional economy was best discussed as a part of the whole economy. It was thought that this would demonstrate its importance, that it would be made equal if discussed alongside other sectors of the economy such as mining, fishing, or construction, and that it should be measured in the same manner or style as these sectors—by GDP. Making these links has never been easy.

The new approach and methodology introduced in this year's Outlook offers an alternative. It elevates the importance of the traditional economy by placing it within the context of Nunavut's *development* rather than as a part of Nunavut's *growth*. The traditional economy can thus be described in terms of its role in preserving Inuit culture, its connection with the environment, its relationship with social and community cohesion, its ability to offer a productive alternative to the wage economy, and how it provides for income substitution and greater food security. These ideas can be thought of in terms of the sustainability of Nunavut and are presented in Chapter 6.4.

Preparing for Mine Closure

Baker Lake had some anxious times after AEM announced the possibility of Meadowbank closing 3 years ahead of schedule. The company has since made changes that should keep the mine open for the entirety of its 9-year mine life. This reprieve affords the community the opportunity to look at lessons learned from the experience.

Baker Lake was not prepared for the social or economic ramifications of Meadowbank's early closure. It would be well advised to make those preparations now given the mine is scheduled to close in five years time. And, should the price of gold drop below the mine's current operating cost, the mine's future would again be in jeopardy.

The loss of 150 direct mining jobs will have financial, psychological, and demographic impacts on the community. The importance of educational institutions, community support groups, religious or spiritual organisations, and participation in traditional activities will be elevated at that time. The community has time now to find and put in place the resources necessary to solidify these institutions (formal or informal) that support residents in their daily lives. Waiting until after the mine closes is too late.

Its scheduled nine-year mine life was in jeopardy in early 2012. The mine's operating costs were over $1,000 per ounce, turnover and absenteeism of staff was high, and a fire had destroyed portions of the camp.

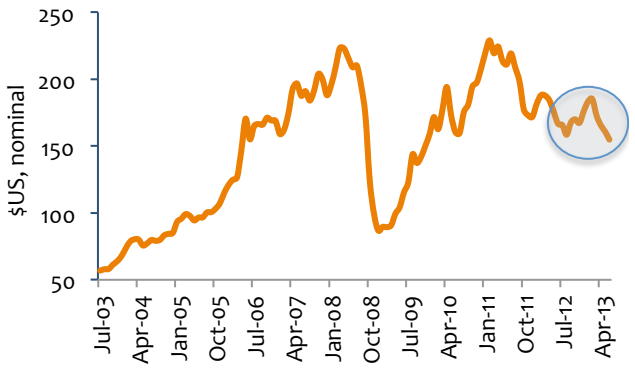
A new labour support program was developed in response that focussed on workforce readiness and career development. The program is working. For example, the mine owner reports retention of haul truck drivers has climbed from 58 per cent to 92 per cent over the past year. This has helped with the overall mine operations as well. Operating costs are down and Agnico-Eagle Mines has suggested that the Meadowbank property does have the potential for an extended mine life through exploration of other deposits within their claim area.

5.3.1.2 Prices

Nunavut is a high cost environment for anyone living or working in the territory. This includes miners as much as anyone else. Mining projects in Nunavut are especially sensitive to price changes because construction and operating costs are high in comparison to other jurisdictions. Estimates for developing a mine site regularly exceed $1 billion because of the need to include the cost of transportation infrastructure such as roads, a railway, or marine facilities, and also because of the high cost of labour, power, and the sometimes-lengthy regulatory process.

Figure 5-1

World Metals Price, Index 2005=100, July 2003 to July 2013



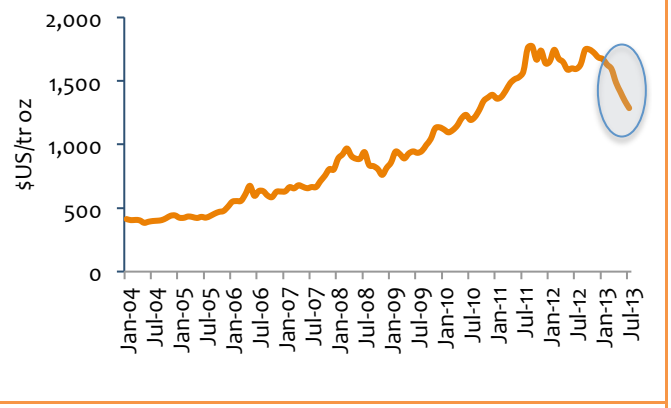
Source: World Bank, *World Commodity Prices*.

For example, AEM's road from Rankin Inlet to its Meliadine gold property will cost the company approximately $1 million per kilometre. The project is feasible in part because it is located a mere 25 kilometres from Rankin Inlet, the Arctic coast, and the community's limited marine infrastructure. Not all projects have this geographic advantage, in fact, most don't. Accessing the base metals at the proposed Izok Lake mine in the Kitikmeot, for example, will require a 300-kilometre road and a port, and once into production, operating costs will include transportation of ore along this very long road and regular road maintenance. These costs can turn rich deposits into marginal projects with their feasibility dependent on commodity prices being at or near historically high levels.

The market price for most minerals rebounded quickly after the 2008-09 recession (see *Figure 5-1*) (World Bank 2013). However, over the past year, prices have receded. For example, at its height in September 2011, gold traded at an average price of $1,772 per ounce. At that time, Meadowbank was operating with costs that exceeded $1,000 per ounce—which is high by industry standards—but there was still plenty of room for profit. By mid-summer, that comfortable profit margin had collapsed as gold traded at $1,286 per ounce (average price in July 2013) (see *Figure 5-2*). The good news is that prices have firmed and AEM has been able to bring its costs down, but margins aren't what they used to be.

Figure 5-2

World Gold Price, $US/troy ounce, 2003 to July 2013



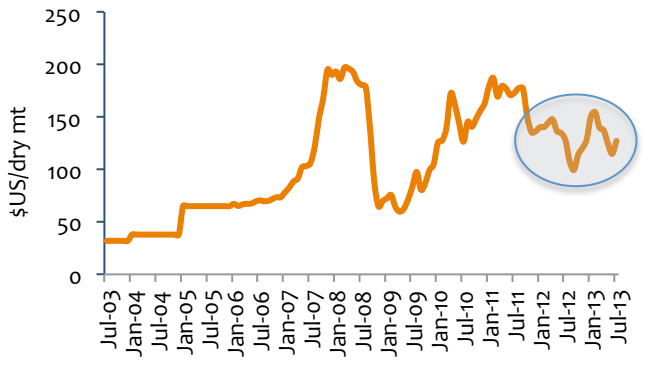
Source: World Bank, *World Commodity Prices*.

There is no consensus amongst pundits on where gold prices will go in the near future, with a range of predictions from $1,100 to $1,600 per ounce. But the drop in price is having a real affect on AEM's Meliadine project causing a delay of at least one but probably two years.

Other gold properties, such as Hope Bay that was once thought to be certainty for development, are now in question. Sabina Gold and Silver Corporation completed a Preliminary Economic Assessment of its Back River project in 2012 with a baseline gold price of $1,250 per ounce, which is typically set at a very conservative level (Sabina Gold and Silver Corporation 2013). A feasibility study is needed at this point to understand the project in more complete terms and under new price estimates.

Figure 5-3

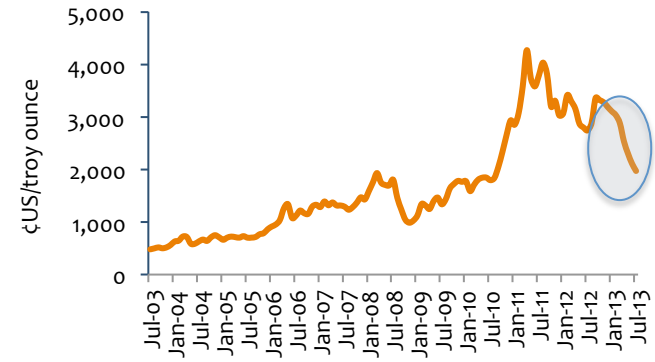
World Iron Price, $US/metric tonne, July 2003 to July 2013



Source: Statistics Canada; Impact Economics.

Figure 5-4

World Silver Price, ¢US per troy ounce, July 2003 to July 2013



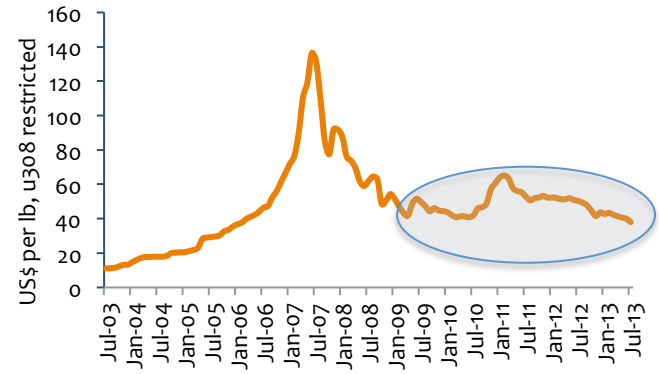
Source: International Monetary Fund, *World Commodity Prices*.

Gold is not the only commodity of interest in Nunavut, nor is it the only one to see prices fall over the last few years. Iron, silver, and uranium prices have also fallen (see *Figure 5-3, Figure 5-4, Figure 5-5*).

Iron prices have been particularly erratic over the past 18 months, after slipping from itheir post-recession peak. As of July, iron was trading in the US$125 (±10%) per metric tonne range, off 30 per cent from its peak in mid-2011. There remains much speculation on its future. Iron prices are very dependent on demand from China. Most experts believe the long-term growth prospects are positive and do not expect prices to fall below $100 per metric tonne. This should be enough to ensure continued development of the Mary River Iron Project.

Figure 5-5

World Uranium Price, $US / lb u308, 2003 to 2013



Source: International Monetary Fund, *World Commodity Prices*.

Silver prices made a tremendous run over a twelve month period beginning July 2010, climbing from ¢1,796 to ¢4,269 (a gain of 140%). But have since fallen right back to where they started, trading at ¢1,971 in July 2013. The Hackett River silver deposit owned by Glencore-Xstrata is Nunavut's most advanced silver project.

The price of uranium made modest gains in 2010, but has been falling steadily since, now trading at $38 per pound. At this price, it is not clear that the Kiggavik project would be profitable.

Canada's Barrick Gold is the world's largest gold producer. As of July 2013, it owned and operated 26 gold mines around the world. Any mine that was operating at a cost per ounce above $1,000 was under review for possible sale or closure. This is a good reminder of how things can change and how tenuous a mining economy can be and reinforces the importance of being prepared for life after mining—whether at the family, community, or regional level.

5.3.2 Future Opportunities

There are, as there were three years ago, a number of important sites that continue to receive attention and investment dollars and that could one day become producing mines. Some of the more advanced projects include Mary River (iron ore), Meliadine (gold), Kiggavik (uranium), Back River (gold), Hackett River (silver, zinc), Izok Lake (zinc, copper, lead), High Lake (zinc, copper), and Hope Bay (gold).

5.3.2.1 Mary River Iron Deposit

Mary River is the most advanced of the projects listed. In the time that this Outlook was being written, the owners of the property took the decision to proceed with development and, in the latter half of the year (2013), began shipping construction materials to site.

The property is located in north-central Baffin Island, approximately 160 kilometres southwest of Pond Inlet. It is co-owned by the steelmaker Arcelor-Mittal from Luxemburg and Iron Ore Holdings Ltd. Original estimates for the project's capital cost were $4.1 billion, which included the mine site development, a 145-kilometre rail line to Steensby Inlet and a port facility there (Baffinland Iron Mines Corporation 2008). Once operating, the mine, transportation corridor, and port were projected to employ 950 people.

That mine plan received regulatory approval in late 2012, however, shortly thereafter, the owners downgraded the plan to approximately 20 per cent of what was originally proposed. The new plan significantly lowers the rate of production and alters the transportation requirements, opting instead for truck transportation on an all-weather road built to Milne Inlet north of the mine site on the east coast of Baffin Island near the community of Pond Inlet. The result of the latter change meant additional regulatory approvals were needed. But this last point has not been a major impediment to the project to date.

Despite the mine plan shrinking by 80 per cent, the project still represents an enormous economic opportunity. Construction will span two years at a cost of US$700+ million. Operations will continue for a minimum of 20 years, with the initial "Early Revenue Phase" targeting an annual production rate of 3.5 million tonnes. Employment will be scaled back with the smaller mine plan, but 750 construction jobs can still be expected, and approximately 420 jobs for production (Baffinland Iron Mines Corporation 2013).[5]

The owners have indicated that the original mine plan remains a part of the long-term planning that would see production increased by 18 million tonnes per year (ArcelorMittal 2013). This full project could start as early as 2015 under the right conditions. In that scenario, the construction phase would continue for five years with employment peaking in year two at 2,700.

Mary River Iron Project *Early Revenue Phase*: Quick Facts

Mine Type	Open pit
Construction Estimates:	
Cost	$700 million
Timeline	3 years
Workforce	Up to 750 annually
Operation Estimates:	
Mine Life	20+ years
Production	3.5 million tonnes per year
Workforce	420

5.3.2.2 Meliadine Gold Deposit

Agnico-Eagle Mines owns the Meliadine Property and earlier this year (January 2013) submitted its Draft Environmental Impact Statement to Nunavut regulators. Plans to develop

[5] These are total employment figures. On-site employment is expected to average 600 for construction and 210 for operations.

the property as early as 2014 have been altered as a result of the drop in gold prices discussed earlier. Spending on the property will be scaled back by about 10 per cent ($10 million) to $80 million in 2013 and by 65 per cent ($80 million) to $45 million in 2014.

The delay is a setback for the Rankin Inlet economy. It has been growing over the past two years, benefiting from the mineral exploration and mining activity throughout the Kivalliq region that is bringing new investment dollars to the community. The Government of Nunavut is spending $27 million to upgrade the hamlet's airport. The government has also selected Rankin Inlet as one of the 11 communities that will receive new public housing units over the next year. Business leaders are looking at a plan to improve the community's marine infrastructure. And for its part, the hamlet is in the midst of developing a new community plan in preparation for dealing with the effects of the Meliadine Project.

Meliadine's future development will depend on a recovery in gold prices. Assuming that happens over the next 18 months, AEM could potentially start developing the property by 2016 with production commencing in late-2018 or early-2019. This new date coincides with the planned closure of the company's Meadowbank operations. Given the delay, it is quite possible that AEM is now looking at the feasibility of moving equipment from Meadowbank to Meliadine as a means to improving the financial viability of the latter project.

With no overlap, the total number of mining jobs in the Kivalliq region will remain unchanged as work shifts from one mine to the next—notwithstanding the jobs created during construction of Meliadine and reclamation of Meadowbank. There could be some challenges here depending on how many Baker Lake residents currently working at Meadowbank want to transfer to Meliadine. A high number of fully trained and experienced transfers would lower the mine's employment impact for Rankin Inlet.

Meliadine Gold Project: Quick Facts

Mine Type	Open pit & underground methods
Construction Estimates:	
Cost	$1 to $1.3 billion
Timeline	3 years
Workforce	1,500 annual average
Operation Estimates:	
Cost	$230 million annually
Mine Life	13 years
Production	360,000 oz. gold annually
Workforce	700

5.3.2.3 Izok Corridor Project

The Izok Corridor Project combines the mineral deposits at Izok Lake and High Lake with a proposed all-weather road to a port facility on the Arctic coast. Izok Lake is situated just north of the NWT/Nunavut border in the Kitikmeot region, 300 kilometres southeast from Kugluktuk. It is considered one of the highest-grade, undeveloped copper-zinc deposits left in the world. The High Lake mineral deposit is situated 190 kilometres east-southeast of Kugluktuk and contains copper, zinc, gold, and silver. Both properties are owned by MMG Resources, which is a subsidiary of the Chinese mining company Minmetals Inc.

Development of these deposits has long been delayed due to a lack of transportation infrastructure and other logistical challenges. The developer also faces regulatory challenges because the property is within the *Mowhi Gagha De Niitlee* boundary, which is a part of the Tlicho Agreement (Tlicho Agreement 2003).

MMG Resources submitted a project proposal to regulators in 2012, but later withdrew that submission in order to conduct further exploration, engineering, and planning. That work is now underway and under the right set of circumstances will result in the submission of a new project description in late 2014 at the earliest.

This project, should it proceed, would be huge, rivalling Mary River in terms of its logistical needs. Construction would likely span three to four years given the need for a road, port, and multiple site developments. Production would span 10 to 15 years. The size of workforce is unknown, but one could speculate that the labour component would again rival Mary River's full project with employment approaching 1,000.

5.3.2.4 Back River Gold Deposit

The Back River Project is made up of several gold deposits approximately 75 km southwest of Bathurst Inlet. Sabina Gold and Silver Corporation owns the property. Sabina completed a Preliminary Economic Assessment in May 2012 and submitted a project description to regulators one month later (Sabina Gold and Silver Corporation 2012). The company is currently engaged in advanced engineering, baseline environmental studies, and on-going exploration.

Sabina reports the project will require a two-year construction period and 1,600 person-years of employment. In its Preliminary Economic Assessment, pre-production capital costs were estimated to equal $450 million, with another $388 million needed during the mine life. Operations will span 10 to 15 years, employing a staff of 900 workers, with an estimated operating cost of $542 per ounce. These estimates make the property extremely attractive. More refined numbers should be released with the feasibility study. The company has reported it could be operating as soon as 2016. Given the current stage of development and the state of world capital markets, one should not expect delays to this timeline.

As with all landlocked mineral deposits in Nunavut, the Back River Project requires a seasonal or all-weather road to connect with the coast. The optimal solution for this project is to coordinate with their neighbour Glencore-Xstrata, which also requires a road for its Hackett River Project. The two properties are 50 kilometres apart.

5.3.2.5 Hackett River Silver/Zinc Deposit

Hackett River is a silver, copper, lead, and zinc deposit owned by Glencore-Xstrata. Xstrata acquired the property from Sabina Gold and Silver in 2011, and has since merged with Glencore.

The property is located south of Bathurst Inlet. Its measured and indicated resources total 105 million ounces of silver and 25 million tonnes grading 4.2 per cent zinc (Vaccaro 2013). A 96 kilometre all-weather road to the Arctic coastline and a port facility would be required to develop this site. If developed, this project has resources to sustain 16 years of open pit and underground mining (Sabina Gold and Silver Corporation 2009). Timing for this project is uncertain. An optimistic view would have the mine developed by 2018, but with prices as they are, the project may need a substantial and robust recovery in prices before it can proceed.

5.3.2.6 Kiggavik Uranium Deposit

The Kiggavik Project is a uranium deposit located 80 km west of Baker Lake. It is owned by AREVA Resources that has as its majority owner the Government of France. The deposit is estimated to contain resources representing approximately 52,000 tonnes of uranium with a grade of approximately 0.23% (AREVA Resources Canada, Inc. 2008). Based on a reserve of 44,000 tonnes, the property has the potential to remain in production for 17 years, produce 2,000 tonnes to 4,000 tonnes of uranium annually, and employ a staff of 600 people (ARVEA Resources Canada, Inc. 2013).

AREVA Resources is in the final stages of its regulatory process, having submitted a draft environmental impact statement to the Nunavut Impact Review Board (NIRB) in late 2011. In July of 2013, NIRB issued its final instructions to the company on how to proceed to the Final Environmental Impact Statement. That final document is expected early in the New Year (2014).

Nunavut Tunngavik Incorporated supports uranium mining in Nunavut according to its Uranium Exploration and Mining Policy. Not all Nunavummiut share this position. An independent, not-for-profit, public interest group, Nunavummiut Makitagunarningit, formed in 2009 to provide information and public awareness on the uranium industry to Inuit beneficiaries of the Nunavut Land Claim Agreement and the Nunavut public at large (Nunavummiut Makitagunarningit 2009).

As stated earlier, the low price of uranium is a critical component in judging this project's viability. Assuming an increase in prices, the project could be underway before the end of this decade.

In 2007, Nunavut Tunngavik Incorporated established a new Uranium policy reversing its previous stance against it (Nunavut Tunngavik Incorporated 2007). NTI owns several sections of land with known uranium deposits and selected others for its uranium potential.

In accordance with the policy, NTI will support uranium exploration and mining in Nunavut if these activities are carried out with the objectives and policy statements set out in its Uranium Policy, NTI's other policies, and all regulatory requirements.

The guiding principle of the policy is that uranium exploration and mining must be carried out in an environmentally and socially responsible way, and the uranium that results from the mining shall be used only for peaceful and environmentally friendly purposes.

The objectives of the policy are as follows:

1. Support Responsible and Peaceful Uses of Nuclear Energy

2. Require Benefits from Uranium Exploration and Mining

3. Ensure Protection of Human Health

4. Limit Impacts of Uranium Exploration and Mining

5. Promote Participation of Inuit

5.3.3 Mining Outlook

Predicting the future for mining in Nunavut with any degree of precision has been challenging during the past decade. There are numerous examples of projects that have risen to prominence bringing hope to communities only to fade away for any number of reasons. Hope Bay Gold Project and Jericho Diamond Mine are good examples. Many of these deposits have changed hands several times, have been in the exploration phase for a prolonged period of time, and continue to exhibit uncertainty regarding their future development. Low commodity prices, challenging capital markets, and high cost of development are major contributors to this uncertainty.

To varying degrees, Mary River, Meliadine, Kiggavik, Roche Bay, Hackett River, Back River, Izok Lake and High Lake, Jericho, Lupin, and Hope Bay, can be included in this list. In other words, every project in Nunavut!

In 2010, Newmont Mining Corporation was quickly moving toward development of Hope Bay, uranium prices were on the rise, and Baffinland was advancing Mary River as a $4.1 billion project. In the few years that followed, Newmont abandoned then later sold its Hope Bay property, uranium prices fell back to a price below US$40 per pound, while Mary River continued through the regulatory process to its successful conclusion only to reduce the project scope by 80 per cent one month later.

This is the nature of mining. The most difficult thing for the industry to accomplish is moving a project from exploration to development—there is tremendous risk involved and requires millions of dollars from investors around the world willing to risk their own money on the project. Once past this stage, however, life gets much more predictable. A company would be hesitant to shut down a project after its shareholders have poured millions if not billions of dollars into it, though this can still happen (Hope Bay being an example).

Given the information available today (autumn of 2013) on world prices and the investment signals coming from project proponents, there can be some certainty that Mary River will proceed with its construction and will begin production in 2015. Meliadine is likely to be developed, but not until Meadowbank is finished and only if gold prices remain stable or increase. A drop in the price of gold could mean more delays. Izok Lake and High Lake, Hackett River, and Kiggavik are owned by large international mining companies that have the necessary finances for development, which gives the projects some credibility, though all continue to face challenges associated with economic viability and, regardless of the owner, will not be developed if it means losing money. Smaller companies own Back River and Hope Bay. In their cases, more favourable capital markets in addition to higher prices are likely needed before moving to development.

It is fair to say that a return of high commodity prices would be positive for the mineral exploration and mining sector. Until then, Nunavut should prepare itself for no more than one or two mines opening in the next five years, while also preparing for the closure of Meadowbank. Beyond the five-year outlook and with better market conditions, any one of the five advanced projects listed could be developed or nearing production—predicting which one and exactly when is too speculative at this stage.

5.4 PUBLIC SECTOR

5.4.1 Current Conditions

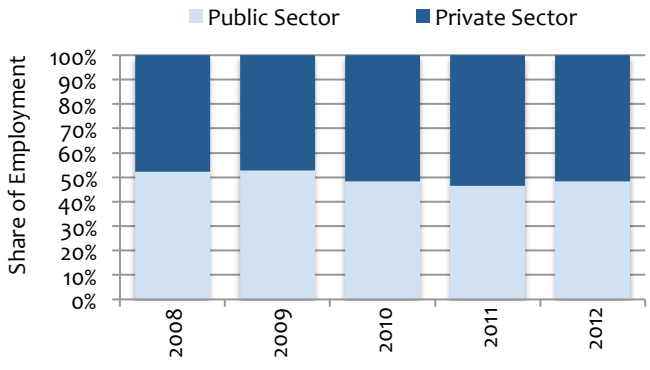
The public sector including government spending on goods and services, public infrastructure, education, health and social services, and defence is the largest component of Nunavut's economy. It spends more money and employs as many people as all other economic sectors combined (see *Figure 5-6* and *Figure 5-7*).

It is useful to think of government as a stabilizing force within the economy. It does not offer much potential for growth, but it is also less likely to suffer losses in spending or employment.

In Nunavut, approximately 90 per cent of government activ-

Figure 5-6

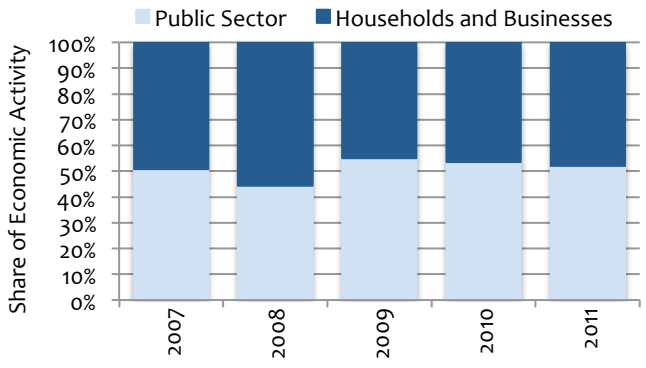
Public vs Private Sector Employment, 2008 to 2012



Source: Statistics Canada, *Labour Force Survey*.

Figure 5-7

Public and Private Sector's Share of Expenditures, 2007 to 2011



Source: Statistics Canada, System of National Accounts, CANSIM #384-0038.

ities are financed through transfers from the federal government. Nunavummiut are responsible for contributing the other 10 per cent. Under this arrangement, a huge drop in Government of Nunavut's own-source revenues—a catastrophic event for a provincial government—would have only a minor effect on the territory's budget.

The value of this stability was revealed during the past recession, when the country suffered job losses totalling 325,000 from the fourth quarter of 2008 to the third quarter of 2009. In Nunavut, employment grew during that time period and again in 2010, aided in large part by activities in the public sector.

The government's contribution to the economy is typically evaluated in terms of its direct impact and what it contributes in terms of employment and GDP. Also important is the impact of government spending on businesses operating in Nunavut and the additional benefits that flow from its contribution to personal incomes. This is sometimes referred to as the direct endogenous, indirect and induced effects. Numerous businesses in Nunavut exist almost exclusively because of the spending by government.

To better appreciate the extent of this impact, consider that for every dollar the Government of Nunavut spends on labour income for education, health, and administration, it spends $1.50 elsewhere in the economy (Statistics Canada 2013). Not all recipients of these other expenditures are Nunavut-based companies—for example, government buys fuel and computers that are produced elsewhere. But for those that are based in Nunavut, the businesses employ local staff, rent space, invest in local capital, and purchase materials of their own. All of these activities extend the overall impact of government spending.

Induced effects refer to the economic activities generated by employees spending their wages. The steady growth in services, including the expanding retail choices, in Nunavut can be largely attributed to the induced effects of government spending.

The federal government gives a grant to the Government of Nunavut each year according to the Territorial Formula Financing (TFF) Agreement. The purpose of this transfer is to ensure a certain degree of equality in the provision of public services, and in many respects is similar to Equalisation payments that are transferred to the so-called "have-not" provinces in southern Canada.

The formula determines the annual transfer by subtracting eligible revenues from a general expenditure base. The eligible revenues are determined from the revenue potential that exists within a standardised tax base applied to the Territory and from an additional revenue block formulated to approximate the Government of Nunavut's ability to raise funds by additional tax means. Within the standardised tax base, there are seven tracked revenues:

- Personal income tax
- Corporate income tax
- Gasoline tax
- Diesel tax
- Tobacco tax
- Liquor tax
- Payroll tax

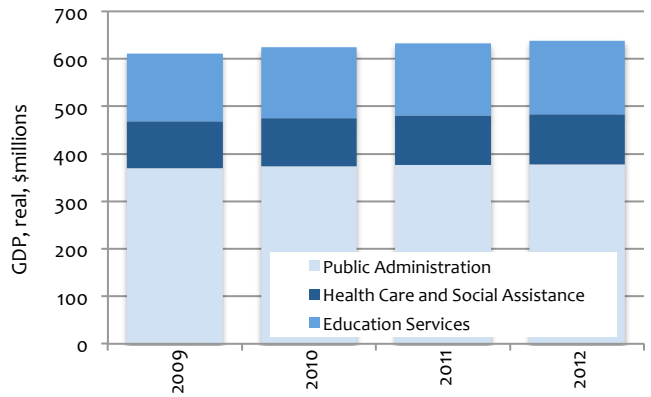
All eligible revenues are applied to the formula as a three-year moving average with a two-year lag. Furthermore, an economic development incentive of 30% is applied to the eligible revenues. This last provision amounts to the extra revenues the territory can keep when the economy grows quickly over a short period of time.

5.4.2 Public Sector Outlook

While very stable, the public sector does not offer much opportunity for growth. Over the past few years, government's contribution to Nunavut's GDP has remained virtually unchanged, growing by just 0.9 per cent in 2012 (see *Figure 5-8*).

Figure 5-8

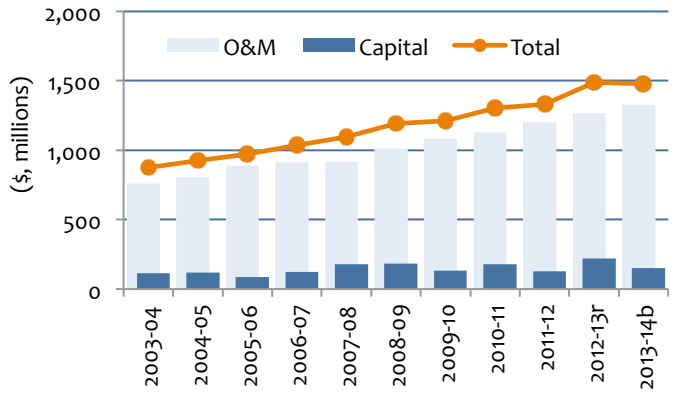
Public Sector's Contribution to GDP, $millions, 2009 to 2012



Source: Statistics Canada *CANSIM Table 379-0030*.

Figure 5-9

Government of Nunavut Spending, 2003-04 to 2013-14



Source: Government of Nunavut, Department of Finance, *Main Estimates*.

The Government of Nunavut currently employs 5,700 people directly in various public administration, health, and education roles (Nunavut Bureau of Statistics 2012). There does exist an opportunity for increased employment in health and education, with some emphasis on hiring individuals who speak Inuktitut. But in the bigger picture, this added employment, should it occur, would not have a significant impact on Nunavut's labour market however it would have very real impacts on education and health outcomes. For its part, the federal government will bring approximately 60 new hires to Nunavut in 2017 in conjunction with CHARS, but otherwise will not increase its employment numbers in any substantive way between now and then.

Government spending on public administration should continue very much in line with current trends (see *Figure 5-9*). As mentioned, the federal government provides the territorial government with approximately 90 per cent of its annual budget ($1.39 billion in 2013-14 for a territorial budget of $1.53 billion) through the Territorial Formula Financing agreement and through the Health and Social Transfers (see *Table 5-1*). Much of the year-to-year variation in spending is the result of the government's capital budget, which rises when the federal government provides additional special purpose funding such as the $100 million for public housing that was announced in the 2013-14 federal budget (Government of Canada 2013).

5.5 FISHING

5.5.1 Current Conditions

The majority of Nunavut's commercial fishing takes place offshore in the Hudson and Davis Straits in the eastern Arctic. The primary commodities are Greenlandic Halibut (also known as turbot) and Northern Shrimp. Inshore fishing targets turbot and Arctic char. The inland fishing in the Kivalliq and Kitikmeot regions is linked to tourism and subsistence activities and is based almost exclusively on Arctic char. Fishing interests from the Baffin region and Nunavik have partnered to share portions of the shrimp fishery in the Hudson Strait.

Table 5-1

Canada Health and Social Transfer and Territorial Formula Financing for Nunavut, 2005-06 to 2-13-14

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14*
Canada Health Transfer	23	23	25	25	27	27	29	30	32
Canada Social Transfer	10	11	11	11	11	11	11	11	12
Territorial Formula Financing	821	844	893	944	1,022	1,091	1,175	1,273	1,350
Total Transfers	854	878	929	980	1,060	1,129	1,215	1,314	1,394
Transfers per capita	28,050	28,400	29,632	30,858	32,766	34,207	36,174	38,855	40,622

Source: Department of Finance Canada *Major Federal Transfers*

* includes projected transfer by the federal government

Table 5-2

Nunavut's Allocations for Turbot and Northern Shrimp, tonnes, per cent of total, and landed value, 2001 and 2011

	Allocation (tonnes)	
	2001	**2011**
In Shore Cumberland Sound Turbot	500	500
Division 0A Turbot	4,400	6,500
(per cent of allowable catch)	100%	100%
Division 0B Turbot	1,500	3,350
(per cent of allowable catch)	17%	45%
Division 0A & 0B Turbot	5,900	9,850
(per cent of allowable catch)	60%	70%
Landed Value of Offshore Turbot	$35.4 million	$78.8 million
SFA 0-3 Northern Shrimp	4,028	10,861
(per cent of allowable catch)	18%	31%
Landed Value of Northern Shrimp	$12.1 million	$32.6 million

Source: Nunavut Offshore Allocation Holders Association

The fishery has seen strong growth over the past decade as the territory acquired a greater share of the turbot and shrimp fisheries in its adjacent waters in addition to being awarded new fishing licenses in Cumberland Sound and in the Davis Strait. Over the ten-year span, from 2001 to 2011, Nunavut's total off-shore allocations for turbot have grown from 5,900 metric tonnes (60 per cent of the allowable catch) with a landed value of $35.4 million to 9,850 metric tonnes (70 per cent of the allowable catch) with a landed value of $78.8 million (see ***Table 5-2***). Most recently, in late November 2013, Fisheries and Oceans Canada raised the quota for turbot in Division 0A from 6,500 tonnes to 8,000 tonnes. The additional quota will go to Nunavut licence holders, raising the overall turbot allocation in adjacent waters to 73 per cent.

Historically, the industry has had difficulty finding Inuit interested in a career in fishing, especially on offshore vessels. However, numbers have improved in the last few years. There are now times when half of the crew of a large offshore vessel are Nunavummiut. It is important to note that Inuit from all three regions are working in the offshore fishery. Combined with the inshore fishery and with workers at Pangnirtung's fish processing plant, the industry now employs as many as 200 Nunavut residents at different times throughout the year.

The improved employment can be attributed, in part, to the success of the Nunavut Fisheries and Marine Training Consortium. This multi-stakeholder group was formed in 2005. To date, it has invested close to $12 million in training, having offered 83 courses, generating 718 course completions with a graduation rate of 91 per cent. Courses offered include basic training such as pre-sea trawl worker and small vessel operator proficiency to more advanced training for bridge-watch, marine diesel mechanic, and fishing masters IV. These courses are offered throughout Nunavut, which is contributing to the expanding interest in fishing careers amongst Inuit. Most Nunavummiut employed on offshore vessels have entry-level positions, but there are some that are now advancing into more senior and higher-paying positions.

Over the past few years, beginning in 2010, the Department of Environment with the Government of Nunavut has been working on a *Nunavut Fisheries Branding and Marketing Initiative.* Its objectives include creating a Nunavut fishery brand that distinguishes fish harvested by Nunavut fisheries from other fish products from around the world and promotion of the Nunavut brand to target markets through a range of marketing materials and activities (Department of Environment 2010). One result was the Truly Wild branding for Nunavut fish products.

There are several active Inuit groups involved in Nunavut's fishery:

Arctic Fishery Alliance is a partnership between the Hunters and Trappers Organisations in Arctic Bay, Grise Fiord, Resolute Bay, and Qikiqtarjuaq.

Baffin Fisheries Coalition was formed in 2001 and now has the Hunters and Trappers Organisations in Kimmirut, Iqaluit, Pangnirtung, Clyde River and Pond Inlet as owners.

Cumberland Sound Fisheries and Pangnirtung Fisheries formed a partnership to manage new quotas for the Cumberland Sound area.

Qikiqtaaluk Fisheries Corporation is wholly-owned by the Qikiqtaaluk Corporation.

Unaaq Fisheries is jointly owned by Makivik Corporation representing Nunavimmiut and Qikiqtaaluk Corporation representing Nunavummiut from the Baffin region.

All of Nunavut's active offshore fishing groups have come together to form the Nunavut Offshore Allocation Holders Association (NOAHA). The industry association provides a unified voice on issues of concern to the fishery (Baffin Fisheries Coalition 2012).

5.5.2 Fishing Outlook

There are several key issues that Nunavut's fishery will focus on over the medium term. These include:

- Increasing its share of quota from adjacent fishing zones;
- Expanding the inshore fishery;
- Developing more and better marine infrastructure;
- Continuing its research into increased quotas and the commercial viability of new species; and,
- Advancing young Nunavummiut fishers into higher classification jobs.

Nunavut is investigating the viability of a larger inshore turbot fishery that might be a more attractive career option for some Nunavummiut. Its advantages include a much smaller capital investment for potential entrepreneurs and shorter lengths of time away from home—typically two or three days rather than several weeks.

The inshore fishery in Cumberland Sound is typically active in the winter and spring months. Fishers use longline gear set through holes in the ice. Poor ice conditions have had a major impact on the winter fishery in recent years, reducing the harvest to 9 tonnes, 70 tonnes, and 3 tonnes for 2005, 2006, and 2007 respectively (Canadian Science Advisory Secretariat 2008). The most recent winter fishery (2013), however, netted a record catch of more than 300 tonnes of turbot over a three-month period from January to April (Vela 2013). At its peak, there were more than 100 active fishers working in the inshore fishery.

There is also growing interest amongst fishers in acquiring boats large enough to fish Cumberland Sound turbot in open water during the summer and fall fishery. In the past, Pangnirtung Fisheries has hired companies from Labrador to fish turbot as a part of an experimental summer fishery. Their success has encouraged more local ownership of vessels and requests to extend the Cumberland Sound fishery zone further south.

With the increased offshore quota, Nunavut will have to pay closer attention to the possibility of a harbour on the east coast of Baffin Island that would allow its catch to be offloaded in Nunavut. Currently, Nunavut's fishing vessels sail to Greenland to do this. Several opportunities would accompany this infrastructure. While at port, the fishing boats might

- Change crews—meaning more business for airlines, hotels, and food services;
- Repair nets—creating an opportunity for a small seasonal business for a local entrepreneur; and/or
- Purchase food and supplies—increasing the business for the local wholesaler/retailer.

The Government of Nunavut has continued its research work aboard its 64-foot steel research vessel, the RV Nuliajuk (Government of Nunavut 2013). It is currently participating in a four-year, $7 million research program that is

- Looking at extending the Cumberland Sound Inshore Fishery boundary, as well as
- Studying methods for reducing Greenland shark by-catch,
- Exploring a possible clam fishery near Qikiqtarjuaq and Clyde River,
- Conducting shallow water bottom mapping, and
- Cataloguing other species.

5.6 TOURISM[6]

5.6.1 Current Conditions

Tourism has always been and remains an industry with a potential for growth and development. Nunavut offers travellers great natural beauty, a fascinating history and culture, and slowly, more and better quality tourism products and services. The sector is comprised of licensed tourism operators and establishments that include outfitters, hotels, and restaurants, as well as airlines, cruise ships, and community-based businesses such as arts and crafts businesses and taxi services (Nunavut Tourism Partner Organisations 2013).

Most tourists to Nunavut are Canadian (91 per cent of all visitors) and are travelling for business (57 per cent of all

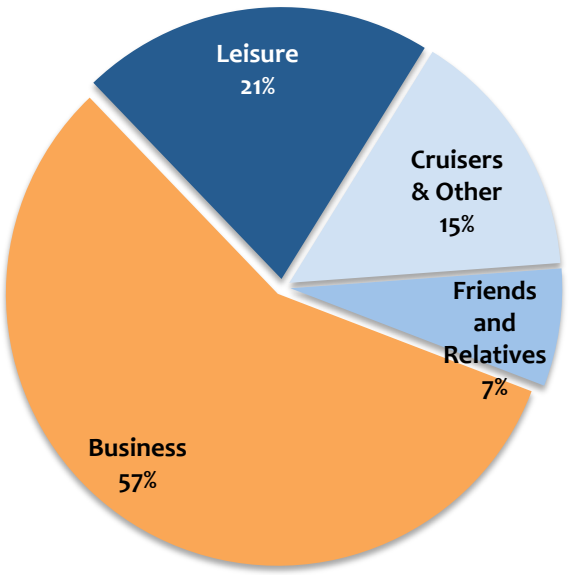
In 2013, several Nunavut tourism partner organisations, including Nunavut Tourism, several Government of Nunavut departments, Nunavut Tunngavik Inc., Parks Canada, and CanNor, collectively produced *Tunngasaiji: A Tourism Strategy for Nunavummiut*. Their vision is for Nunavut's tourism sector is stated as:

Tourism will be a dynamic, sustainable industry that showcases our outstanding and unique natural, cultural and recreational resources, and contributes to a high quality of life for Nunavummiut.

[6] The source for tourism data presented in this chapter is the *2011 Nunavut Tourism Exit Strategy* as presented in *Tunngasaiji: A Tourism Strategy for Nunavummiut* unless otherwise noted.

Figure 5-10

Travellers to Nunavut, percentage of total, 2011



Source: Nunavut Tourism, *2011 Nunavut Tourism Exit Survey*.

travellers, see *Figure 5-10*) (Nunavut Tourism 2011). The *2011 Nunavut Tourism Exit Survey* found that business travellers spend more time per visit and spend more money than other tourists.[7] It was estimated that the average business traveller spends just over $4,500 per visit, with a little over 40 per cent on items other than transportation.

Leisure travellers are the second largest component in Nunavut's tourism market. They represent 21 per cent of all visitors. These tourists come for cultural activities (which includes viewing and purchasing art), sport hunting and fishing, adventure, and for the scenery found in Nunavut's many Parks and Heritage Rivers. Leisure tourists spend, on average, $4,450 per visit including $2,300 on non-travel tourism products and services.

Other segments of the tourism market include Friends and Relatives and Cruise passengers. The former constitutes 7 per cent of the total market. Not surprisingly, they spend much less than other tourists, averaging $1,825 per visit including airfare.

There were 18 cruise ships and 1,890 cruisers registered for voyages into Nunavut in 2011. These numbers are down since the recession and since the cruise ship *Clipper Adventurer* ran aground 55 nautical miles from Kugluktuk in 2010. For the 2013 cruising season, 21 ships are expected.

Cruisers to Nunavut are surprisingly stingy, spending 23 per cent ($1,631) of their travel budget on items other than transportation, preferring instead to participate in activities

The overall objective of *Tunngasaiji* is to provide a foundation for growth and development of a sustainable, Nunavut-based tourism industry that provides benefits for Inuit and all Nunavummiut.

Tunngasaiji focuses on what needs to be done over the next five years to make the tourism sector grow. There are three key elements underlying the approach taken in the strategy.

First, the strategy establishes a foundation from which the industry can grow.

Second, sustainable long-term growth of the Nunavut-based tourism industry requires a coordinated, strategic approach to development.

Third, the strategy is based on partnerships.

The strategic objectives of *Tunngasaiji* are:

- A renewed Travel and Tourism Act, and implementation of associated regulations and policies;
- A framework for the collection of statistical data on Nunavut's tourism sector;
- A structure to promote enhanced coordination and communication among all tourism stakeholders, operators and communities;
- Implementation of the strategy through coordinated investment from key territorial and federal agencies over the life of the strategy;
- Development and enhancement of attractions, products and services;
- Increased Inuit participation and benefits in the development of the tourism sector in Nunavut, as required under the Nunavut Land Claims Agreement and associated Inuit Impact and Benefit Agreements;
- Tourism skills development, education and training programs offered in Nunavut;
- Business development and support targeted to take advantage of tourism opportunities;
- A framework for the active engagement of communities in planning and development local tourism opportunities.

[7] Business travellers include job tourists, but not FIFO workers who fly in and fly out of a work site on a rotational basis and otherwise do not enter Nunavut communities.

and excursions organised by the cruise ship company. The cruise ship industry is still very new for Nunavut and will need greater regulation and oversight should it grow any larger.

The number of international travellers, representing the other 9 per cent of all visitors, is in decline. Visitors from the United States represented 13 per cent of the market in 2006 and now represent less than 5 per cent. This is, in part, the result of dramatic declines in sport hunting that was effected by the increased value of the Canadian dollar against the U.S. currency, then by the recession, and most recently by new restrictions on the importation of polar bear skins (see Table 5-3).

Table 5-3

Declining Numbers and Revenues for Sport Hunting and Fishing in Nunavut

Hunting & Fishing	# of Participants		($)
	2006-07	2010-11	Decline in Revenue
Polar Bear	135	24*	$3,300,000
Sport Fishing	-	-	$2,300,000‡
Musk-ox	166	119	$470,000
Caribou	216	157	$177,000

Source: Nunavut Tourism Partner Organisations, *Tunngasaiji*.
Notes: * figure from 2009-10. ‡ Decline from 2005 to 2010.

Statistically, Nunavut's tourism-related industries account for 3.2 per cent of the territory's Gross Domestic Product, equal to $41.6 million. Growth has been slow, but accommodation and outfitting businesses have grown to employ in excess of 1,250 Nunavummiut (Nunavut Tourism Partner Organisations 2013). This is more local people than currently work in mining and construction combined.

It is understood that the wages earned in tourism-related jobs are less than in these other sectors, but this would be too narrow a view in understanding the role of tourism in Nunavut's economy. As a potential job, tourism offers Nunavummiut a productive alternative to office work, mining, or construction along with the opportunity to work in one's home community. While training can be an important factor in the success of a tourism business, a university degree is not a prerequisite. And while only a handful of Nunavut's tourism operators are able to make their business a full-time, 12-month-a-year occupation, the seasonal nature of Nunavut's tourism industry can be an attractive option for Inuit wanting to pursue traditional activities in the non-wage economy.

With that said, there remain many challenges for tourism in Nunavut. There is no getting around the fact that Nunavut is an expensive destination. The price of airfare means Nunavut is competing with luxury tourism options around the world.[8] The *2011 Nunavut Tourism Exit Survey* found that 51 per cent of travellers trip cost was on airfare.

The cost of accommodation is equally high. Travellers spend approximately 17 per cent of their travel budget on hotels and bed and breakfasts. There has been some investment in new hotels and in renovations over the past few years improving the overall quality of accommodations, however, in many communities, hotel rooms remain below what travellers are accustomed to in southern Canada.

The need for more and better quality products and services extends to all aspects of Nunavut's tourism sector. A greater appreciation for operating standards would help in this regard. Unlicensed operators undermine legitimate businesses putting travellers and the industry at risk. More training and education is needed throughout the industry.

The much maligned community and economic infrastructure throughout Nunavut affects the tourism industry as well. This includes infrastructure with direct links to the tourism sector such as multipurpose structures for the display of visual and performance arts, culture, and/or history but also municipal infrastructure such as safe, clean streets, side walks or walking paths, and marine facilities.

For operators, making a living from the tourism industry is a real challenge. Nunavut is a high cost environment that necessitates charging a high price for services—something that can limit what is already a very small market. It was noted earlier that the seasonal nature of the industry can be appealing for some operators, but it also means fewer opportunities for revenue with the cost of inputs needed to generate that revenue—a boat, licencing, training—remaining the same whether it is used for two or twelve months a year. For those operators trying to grow their business, finding quality staff can be difficult, especially in communities that are experiencing growth in resource development. One result of these many challenges is inconsistent operation of tourism businesses that can weaken the validity of marketing campaigns and risks having disappointed customers.

[8] It is noted that Nunavut Tourism has brokered a deal with air carriers to provide deep discounts to travellers who have purchased a vacation package with a Nunavut Tourism member. These discounts all but eliminate the cost differential between flights to Nunavut versus other North American destinations.

5.6.2 Tourism Outlook

5.6.2.1 Business Travellers

The business traveller is an important market segment in Nunavut's future tourism industry. As already noted, it is the largest segment at 57 per cent of all visitors and continues to grow. Nunavut's strategy will be to entice these tourists to spend a little more time and a little more money before they leave by improving the quality and diversity of non-travel tourism products and services that could fit easily into these tourists' schedules.

Nunavut Tourism will also continue to market the territory as a destination for meeting and conferences. This is an extremely lucrative market segment that can increase the number of business travellers significantly. Improving the quality and diversity of non-travel tourism products and services, including accommodations and meeting space, will be a necessary condition for this campaign to be successful.

5.6.2.2 Leisure Travellers

Unlike business travellers, leisure travellers are visiting Nunavut for the sole purpose of experiencing what the territory has to offer. Nunavut must compete with the entire world for their attention. Tourism attractions, products, and services are of the utmost importance.

Nunavut's tourism partners want to increase the percentage of leisure travellers to 28 per cent of all travellers and to increase their non-travel related expenditures to 55 per cent of their travel budget.

A critical piece of the new tourism strategy aimed at reaching these targets is identifying and developing new attractions. This might include investments in such things as the proposed Nunavut Heritage Centre in Iqaluit, visitor centres in Qikiqtarjuaq, Gjoa Haven or Cape Dorset, and expanding national and territorial parks including the Lancaster Sound National Marine Park.

5.6.2.3 Cruise Ships

The potential for a larger cruise ship industry in Nunavut does exist. Longer seasons and reduced sea ice have combined with growing interest amongst tourists to sail through the Northwest Passage. It is thought that the number of registered cruise ships sailing to Nunavut each year will average 25 over the next several years. This number does not include private yachts and ocean-based adventurers that have been showing up in increasing numbers over the past two or three years.

On the surface, cruising would appear to be a great opportunity for community-based tourism operators and the Nunavut economy in general. But this view likely comes in part because people associate the cruise industry with what they see in the Caribbean. Here, cruise ships are small and there are no harbour facilities for docking. Many of the activities for guests involve nature viewing and are done while at sea. When they come ashore, guests can be disruptive and spend very little money.

> The quantity and quality of Nunavut's tourism products and services varies from one community to the next. If Nunavut is to succeed as a destination of choice among travellers, its attractions, services and products must meet or exceed the standards of domestic and international competitors, while retaining the qualities that make Nunavut a unique destination, including Inuit culture and Arctic land (Nunavut Tourism Partner Organisations 2013).

Not all visits by cruise ships are unwanted and some companies do work with tourism operators to coordinate activities and encourage their guests to participate in what the community can offer. Similar to other segments of the market, for Nunavut to realise the potential the cruise ship industry represents, it needs better and more infrastructure, more product development, and improved communications and coordination between the cruise ships and the communities. It also needs community interest. Preparation of a strategic cruise ship management plan is an action item included in the Nunavut tourism strategy.

5.7 CONSTRUCTION

5.7.1 Current Conditions

Construction is a big part of Nunavut's economy. Over the past several years, its contribution to GDP has been second only to public administration (see ***Table 5-4***). During the summer months and in years when major projects are underway (which, lately, is most years) there can be over a thousand people working in construction throughout Nunavut.

A vibrant construction industry depends on a steady inflow of capital investments. For most of Nunavut's history the majority of these investments came from government. Beginning in 2007, the private sector's contribution has grown

Table 5-4

Top Five Sectors by GDP, Rank, 2009 to 2012

	2009	2010	2011	2012
First	Public Admin	Public Admin	Public Admin	Public Admin
Second	Construction	Construction	Construction	Education
Third	Education	Education	Education	Construction
Fourth	Health	Health	Mining	Mining
Fifth	Utilities	Mining	Health	Health

Source: Statistics Canada CANSIM Table #379-0030

and is now by far the largest contributor to Nunavut's construction activity (see *Figure 5-11*).

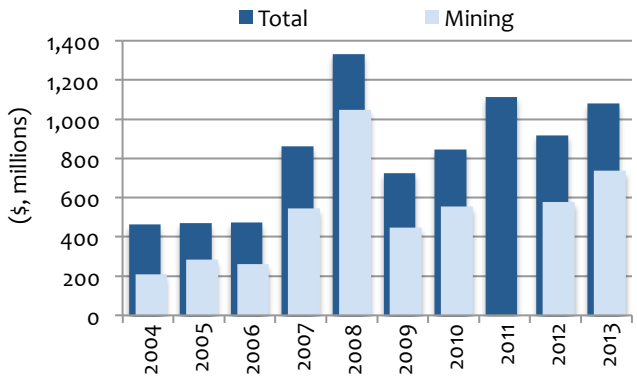
In a typical year, the Government of Nunavut is responsible for the construction of at least 50 per cent of all homes, a lot of the new office space, and almost 100 per cent of all municipal infrastructure. This produces a constant workload for the industry that is distributed throughout the territory creating employment opportunities for local labour everywhere.

The mining industry, on the other hand, spends much more money—proposing projects costing $1 billion or more—and employs far more people—500 to 1,000 at a time. But the site preparation, roads, camps, and marine facilities that are built are concentrated around a single location and the massive workforce requirement exceeds what the local or regional labour pool can provide.

There are a number of challenges for the construction industry related to the need for local skilled workers, the logistical difficulties associated with importing materials, the short building season, and the need for more locally-owned small and medium-sized companies.

Figure 5-11

Capital and Repair Expenditures, Nunavut, 2004 to 2013



Source: Statistics Canada, CANSIM #029-0005.
Note: Mining expenditures for 2011 are suppressed by Statistics Canada to meet confidentiality requirements.

In a typical year, Nunavummiut fill less than half of all construction jobs, and in years where construction activities include a major project such as the building of a mine, the percentage drops even further. For example, close to 80 per cent of the construction crew building the Meadowbank Gold Mine were non-residents.

The challenges with transportation and the short building season can result in delays when trying to respond to immediate opportunities. This is clearly evident in mining, where high prices make some deposits very lucrative, but the property owner must first build a port and road into the site. The time needed for that can be enough that the opportunity to attract investors is missed.

The issues of human capabilities, labour force participation, labour mobility, and a growth in job creation that far exceeds the number of Nunavummiut in the labour market are discussed in greater depth in Chapter 6.

5.7.2 Construction Outlook

With the industry so dependent on mining and government for its sustainability, it is best to look at the spending intentions of these sectors to gauge what will happen in construction in the years to come.

5.7.2.1 Mining-related Construction

The uncertainty within Nunavut's mining industry was discussed earlier. One could devise a reasonable scenario in which five or six developments proceed in the next five to ten years. Mary River, Meliadine, Kiggavik, Izok Corridor, Back River, Hackett River, and Hope Bay are all properties that, under the right market conditions, regulatory environment, and public support could be developed. This list represents more than $10 billion of capital spending. Needless to say, in this scenario, Nunavut's construction industry and all associated support services would be under immense pressure. There would be thousands of construction-related jobs, a rapid expansion of locally owned operators, and millions of dollars invested in Nunavut-based machinery and equipment.

The challenge in dealing with the uncertainty associated with these projects isn't just in deciding when these projects will be developed, but also whether any of the projects will be developed at all. The uncertainty leaves the construction industry in a state of limbo, unable to hire or train an ade-

quate number of staff, invest in and mobilise equipment, or expand shop and warehouse capacity. Investing too early can result in bankruptcy if a project is delayed for a year or two; investing too late can mean missing the opportunity when it arrives.

Even with this uncertainty, there are some reasonable predictions that can be made. The construction of Mary River is now underway. It is expected to cost in excess of $700 million spread over two years and divided between the purchase of building materials, mining and construction equipment and machinery, consumables such as fuel, transportation, and labour. Historically, for large engineering projects like this, approximately 35 per cent of the total expenditure ends up in Nunavut's GDP, with 22 per cent directed towards labour (Statistics Canada 2013).

Meliadine in also a very strong candidate for development, but the recent cutbacks on exploration will mean a revised schedule. AEM does not expect the mine to be operational until 2018 at the earliest, which would imply a 2015 construction start date. Any recovery in gold prices will solidify this prediction, but if prices remain soft, the development could be pushed back further.

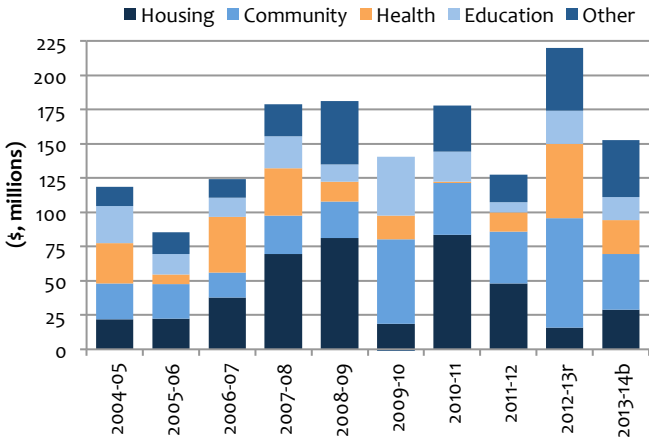
The construction costs will be revised prior to the start of development, but we can expect the final price tag to be in the range of $1 billion to $1.3 billion. The project will create approximately 1,500 direct jobs each year on average over the three-year period, but during peak times in years two and three, direct employment is predicted to reach 1,700.

From these jobs, 30 per cent are considered semi-skilled or manual positions, 55 per cent are considered skilled positions, and the remaining jobs are professional or management positions. Agnico-Eagle Mines has predicted that 200 Inuit will find direct employment at the mine site during the construction phase, with 50 classified as skilled positions (Agnico-Eagle Mines 2012).

Predictions beyond these two projects, Mary River and Meliadine, are less certain. Development at Kiggavik is likely four to five years away. The three inland projects in the Kitikmeot, including Izok Corridor, Back River, and Hackett River, all suffer from the same challenge—the lack of all-weather transportation infrastructure to the coast and marine facilities once there. At approximately $1 million per kilometre, building these roads increases their respective capital costs by hundreds of millions of dollars, and increases the footprint of the projects, which mean a longer regulatory process and more engineering. It is unlikely that any of these projects will be developed prior to 2015.

Figure 5-12

GN Capital Spending, 2003-04 to 2013-14



Source: Government of Nunavut, Department of Finance, *Capital Estimates*.

Notes: (r) revised estimates, (b) budgeted

There is insufficient information from TMAC Resources, the new owners of Hope Bay, to properly assess whether that project could be developed in the next 5 years. The company has recently signed an agreement with Kitikmeot Inuit Association to extend its property leases for five years and will continue to explore the deposits on the property.

5.7.2.2 Government-related Construction

The territorial government plans to spend $153 million on capital projects in 2013-14 (see *Figure 5-12*). This is a 30 per cent drop from the previous year, but is still equal to the government's 10-year average for capital spending. The decline is principally due to several large projects coming to an end.

In the coming years, the federal government will invest about $150 million in the construction of CHARS, while the Government of Nunavut will spend the $100 million it received from the federal government to build more public housing units, and will share in the $300 million cost of building a new airport in Iqaluit. The Department of National Defence has decided that it will go ahead with the Nanisivik Naval Facility after scaling back the project's scope in 2012 (Department of National Defence 2012). Latest reports suggest a $116 million project that could be underway as early as 2014.

Canadian High Arctic Research Station (CHARS) will be a year-round multi-disciplinary facility. Its research priorities will be aligned with the following themes (Government of Canada 2013):

- Resource Development
- Exercising Sovereignty
- Environmental Stewardship and Climate Change
- Strong and Healthy Communities

Approximately $150 million will be spent over six years building and equipping the facility. Another $46 million will be spent over that time period for the CHARS Science and Technology research program. Beginning in 2018-19, the fully operational station will have 60 to 70 staff and an annual budget of $26.5 million (Government of Canada 2013).

The Iqaluit International Airport Improvement Project includes a new airport building; expanded aprons for planes to park; new lighting systems; an upgraded runway; and a new combined services building that will house the fire-fighting vehicles, support equipment and the heavy equipment that maintain the runways (Public-Private Partnerships Canada 2012).

The federal government has committed $73 million to the project, with the remaining costs to be shared between the Government of Nunavut and the consortium selected to design, finance, build, and operate the airport for 30 years.

The full extent of this project's contribution to the economy and construction industry will be known when the detailed design and construction plans are developed. As a starting point, we can assume a similar impact to what is generated by mining developments, though non-residential construction tends to have a slightly higher GDP to Gross Output ratio (meaning a slightly larger share of the overall expenditure ends up in Nunavut).

Analysis of the airport project must consider how it will fit in with the Mary River Project when thinking about labour force participation rates and available resources. For example, work on the airport project will allow Iqaluit-based labour to live at home and work a regular shift rather than living in a camp for 2 weeks at a time.

5.8 ARTS SECTOR AND CULTURAL INDUSTRIES

5.8.1 Current Conditions

The arts sector and cultural industries are vital to the Nunavut economy and the preservation of Inuit culture and heritage. As an economic activity, it is very difficult to quantify. Many of the sales in this sector, especially those of carvings, jewellery, and prints, take place in the informal economy (sometimes referred to as the 'underground' economy because the transactions are not recorded and therefore avoid taxation). A study conducted for the Department of Economic Development and Transportation in Nunavut estimated that artists contribute the equivalent of $22.9 million to the territory's GDP (Nordicity 2010). This figure hides the role of arts sales as a supplement to other income Inuit receive through work or social assistance.

Analysis of Nunavut's arts sector is typically focussed on traditional Inuit carvers, singers, and print makers, but there is increasing growth in other areas. The Nunavut Arts and Crafts Association has reported a growing interest amongst art buyers in Inuit artists who are exploring modern themes and new mediums and this is being picked up by some of Nunavut's master artists who are producing more art pieces based on non-Inuit themes.

In Toronto, an Inuit master artist completed a painting at an exhibition that immediately sold for $20,000—the painting was of a tractor. Another Inuit artist was recently commissioned by an international art collector to produce a painting of an elephant. These are special cases, but are a good illustration of the trend toward contemporary art forms and non-traditional imagines.

Nunavut has seen steady growth in its film industry over the past decade, beginning with the international success of Atanarjuat in 2001. The film commission has expanded its role to become a film development corporation and is actively working to expand the film industry in Nunavut (NEDS Roundtable 2013). While the overall contribution to Nunavut's GDP is small, the film industry employs many local people on a part time and seasonal basis. On a per capita basis, Nunavut has approximately 10 times the domestic production spending of any other Canadian or international circumpolar jurisdiction (Nordicity 2009). The film industry currently contributes about $9.2 million to the Nunavut economy.

5.8.2 Arts Sector Outlook

With the Nunavut economy poised for expansion in mining, construction, and fishing, it is likely that the arts sector will lose potential artists who are attracted to the paid employment. This will effectively lower the overall output of art and lower its contribution to GDP (whether recorded or not). However, this could ultimately prove to be a benefit for the remaining artists if it results in a drop in supply of lower quality work, coinciding with improvement in the quality of art that is being produced.

The growing economy also increases the market size for existing artists, including an increased number of Nunavummiut with enough income to consider the purchase of art and a greater number of business travellers (that includes more job tourists who might purchase art as a gift or for their family).

A challenge for the arts sector remains infrastructure. There are insufficient venues throughout Nunavut for artists to produce and display their products and interact with prospective buyers. There has been no progress in making the much talked about Heritage Centre for Iqaluit a reality. In the meantime, many young and emerging artists wanting studio space in order to turn their skills into a small business struggle to move out of their home because of the cost of rent and utilities.

An arts centre is being built in Kugluktuk. It was financed in part by contributions by the Government of Nunavut and the Canadian Northern Economic Development Agency, but was only made possible when BHP Billiton, the former owners of Ekati Diamond Mine, stepped forward with a major contribution. That mine has an Impact Benefit Agreement with the community. This linkage between industry and non-profit organisations is becoming increasingly important, with more traditional benefactors such as the GN and Government of Canada playing a smaller role. The centre will include retail space, rooms for artists to work, as well as boardrooms and offices.

The arts sector strategy, the *Sanaugait Strategy*, was created in 2006. It is to undergo a review in the upcoming year with plans to expand its scope to include a greater number of traditional and contemporary art, including performance art, graphic design, and culinary art. The Nunavut Arts and Crafts Association has identified a number of additional areas it would like to emphasise in the strategy. They include:

- Definitions for various categories of artists ranging from emerging to master artist;
- Strategies to link the arts sector and cultural industries in Nunavut to other economic sectors and into other sector's plans;
- Continued use of the igloo tag for arts and crafts, incorporated into the Nunavut brand; and
- Shifting export focus to high and elite markets.

6 WHERE WE STAND TODAY, AN INVESTIGATION INTO NUNAVUT'S DEVELOPMENT

Key Highlights

- Nunavut's development can be measured according to the progress in financial wellbeing, human capabilities, social inclusion, and sustainability.
- Employment and average personal income have been rising for the past five years alongside the growing economy. The result is greater financial wellbeing for many Nunavummiut. There are more middle-class and wealthy Nunavummiut than ever before.
- Unfortunately, not all are experiencing such gains. Financial poverty is a huge challenge throughout Nunavut, and there is evidence suggesting that the situation is worsening.
- One piece of evidence of this is a widening income gap. Income inequality is being studied as an indicator of numerous challenges facing a region's development, including health and social problems, criminal activity, abuse, education, and economic growth.
- The group of Nunavummiut that suffer from a deprivation of income are often unable to participate in the economy because of an absence of relevant education, have mobility constraints, or suffer from a form of welfare trap.
- The performance of Nunavummiut in areas of health and education continue to lag far behind other Canadian jurisdictions, and in some areas, lag behind most OECD countries. The poor outcomes in education are particularly harmful given their importance in participating in Nunavut's wage economy, which is becoming increasingly dependent on a highly skilled workforce.
- Housing is a constant challenge for Nunavut and has been described as reaching a state of crisis. There is a high and growing dependency on social housing and there are numerous gaps in the housing continuum that prevent upward movement out of social housing. At the root of this crisis is the fact that too many Nunavummiut cannot afford their own shelter.
- The widening income inequality is affecting the social fabric of Nunavut communities. There is evidence that exclusion is a growing problem. More effort is needed to understand how the tremendous economic potential that exists in Nunavut can become a catalyst for creating a more open, tolerant, and inclusive society.
- Sustainability, as it relates to traditional Inuit pursuits, is under some threat. Diminishing stocks of wildlife (reduced supply), increased harvesting pressures (increased demand), and higher input costs (increased cost of production) are contributing to a smaller non-wage economy. The implications are far reaching should these trends continue. More work on the economics of subsistence in Nunavut is needed in order to understand how public policy might help the management and preservation of this segment of the economy.
- Nunavut's economic growth is bringing more jobs, more money, and recently, more people to Nunavut. Strong systems of community support are needed to ensure Nunavummiut will benefit from this growth.

6.1 FINANCIAL WELLBEING

Having choices is an important aspect of anyone's quality of life and is closely associated with the ability to participate in and benefit from a growing economy. In countries with longstanding impediments to economic growth, it is common to find people have little or no choices in their lives, and in that sense, they have no freedom.

An important output from a growing and vibrant economy is the money it generates, which, in the hands of the local population can afford them the opportunity to improve their standard of living, buy more and better quality foods, purchase additional education for themselves or their children, improve their housing situation, participate in organised physical activity, work less (more leisure time), or take a vacation. Greater financial security can also increase one's confidence to speak out politically or to leave an abusive relationship. When the money earned grows beyond present day needs, people have the option to save for the future, which is essentially an act of deferring today's choices for more choices tomorrow.

The absence of financial resources can have a negative impact in all the areas just listed, but also increases the likelihood of falling into a welfare trap by raising one's aversion to risk. Financial poverty can make every financial decision more difficult and can add stress to a family, which has its own implications for wellbeing.

Increased rates of financial poverty can negatively influence trust in a way that affects relationships at many levels. This is especially the case where financial resources are accumulating inside a small segment of the population. Income inequality and economic differentiation[9] can divide a society if the gaps grow too large. People without financial resources and without any means to acquire them are often without influence in the community. This marginalisation further exacerbates gaps in social cohesion and trust. In extreme cases, the segment of a population that is without any resources might ultimately take actions against economic growth as a means to gain power.

The choices we have and the quality of choices we make are clearly influenced by human capabilities, social inclusion, and sustainability in addition to financial wellbeing. In that sense, the level and extent of a society's freedom is predicated upon all four aspects of quality of life and it is not always clear which is the cause and which is the effect. This is very much in keeping with the modern definition of development as being freedom; that is, having the financial, physical, mental, social, and political means to live a life fulfilled (Sen 1999).

6.1.1 Measuring Financial Wellbeing

How is financial wellbeing measured? It is a relatively easy thing to do. Measuring labour income is a part of the more traditional approach to evaluating an economy. There is no mystery that income levels improve through greater participation in the workforce and expands during times of strong economic growth. Thus, the freedom associated with financial wellbeing can be measured using labour market statistics, changes in income levels, income distribution, consumer expenditure patterns, and the existence of savings.

Questions arise when participation rates are low, income levels are inadequate, there is an absence of savings, and people cannot afford the goods and services needed for even the most basic life. If the economy is performing poorly or there are no jobs available, then a 'traditional' economic analysis would have its answer—it's the economy's fault—and look no further. But what if the inadequate financial wellbeing appears at a time when the economy is vibrant and creating jobs, as is the case in Nunavut? What then? Total and average personal income does not tell us what's going wrong.

A detailed review of the personal financial data of Nunavummiut reveals this scenario exactly (Impact Economics 2012). Unemployment is high, incomes are low, and, as a result, many families are suffering from financial poverty, unable to afford the basics of life by their own means. It might be that these results stem from regional economic disparities; that the poor financial wellbeing of Nunavummiut is really only found in communities that are not growing economically, and that for regions where the economy is growing, financial wellbeing is greatly improved. This should be investigated in addition to the broader assessment of financial wellbeing. Otherwise, the failed relationship between economic growth and financial wellbeing suggests a system in Nunavut that isn't properly aligned to achieve this particular development outcome (greater financial wellbeing).

Before reaching this conclusion, though, a detailed analysis of the labour market and income levels is needed.

[9] Defined as the divide between those active in an economy benefiting from its growth and promoting additional growth, and those unable to integrate into it through some form of exclusion or marginalisation.

6.1.2 Labour Market

At the root of personal and family financial wellbeing are the wages and salaries earned through employment. Wages and salaries are the greatest benefit that an economy provides.

The assessment of Nunavut's economic conditions and opportunities presented in Chapter 5 has shown the territory has tremendous potential for job creation. The mining sector alone could need thousands of ready, willing, and able workers in the coming decade. Even today, without accounting for new resource developments or other potential large-scale opportunities, there are enough jobs to employ many if not most unemployed Nunavummiut.

This last statement will be eye raising for some, but is easily proved by counting the number of *job tourists*[10] working in Nunavut at any given time. Agnico-Eagle Mines alone is importing approximately 525 job tourists in order to operate its Meadowbank Mine and imported more than 1,000 labourers during the mine's construction. Outside mine development, it is estimated that half of Nunavut's construction workers reside elsewhere. Add in the imported doctors, nurses, engineers, accountants, and fishers, and those working at the many mineral exploration sites across Nunavut, and the number of job tourists grows even larger.

> The amount of labour income earned in Nunavut but paid to non-residents grew sharply in the past few years. From $121 million in 2007, job tourists earned $291 million in 2012.

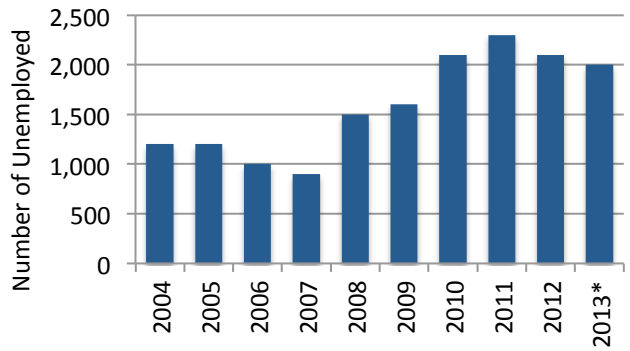
On the surface and without any knowledge of Nunavut's labour force, it makes no sense that across the territory there are thousands of registered unemployed people and thousands more if the definition was expanded to include those who want a job but who have given up looking for one (see *Figure 6-1*) (Statistics Canada 2012).

Why are so many Nunavummiut unemployed given the number of jobs in Nunavut? And, why is the creation of new jobs not having a greater impact on reducing unemployment?

The answer can be found in the human capacity, social inclusion, and sustainability of Nunavut as well as in understanding the nature of the region's economic growth and its

Figure 6-1

Officially Unemployed Nunavummiut, 2004 to 2012



Source: Statistics Canada, CANSIM Table 282-0055.
Note: Statistics Canada classifies someone as unemployed if they are without work, had actively looked for work in the past four weeks, and were available for work. Data for 2013 represent January to November.

labour market. Many of the jobs being filled by non-residents are technical in nature or require a professional designation. Few unemployed Nunavummiut qualify for such jobs. And this is precisely the point. Nunavut is not short on unemployed people; it's short on *qualified* unemployed people. In other words, the answer to these questions lies in understanding the current state of development as much as it does the current state of the economy.

More than any other measurement, indicators of financial wellbeing provide insight into the state of development in other areas. That is, a society's financial wellbeing can be viewed as the result of the development efforts in human capabilities, social inclusion, and sustainability.

How these other areas of development contribute to the current state of employment is described later. This chapter starts the investigation with a closer look at the labour market itself and discovers that, aside from the development issues, much of the unemployment in Nunavut is structural in nature, that too many Inuit are disengaged from the workforce, that there is a welfare trap problem, and that this is all contributing to low employment rates, similarly low income levels, and widespread poverty.

[10] A job tourist is an individual who travels to a region for the purpose of work, but does not reside in that region. This is different than a transient worker, who physically moves to a region, works for a short period of time, and then moves away. In this latter case, the region benefits from that person's consumer spending and their contribution to government tax revenues.

Development is a process of adaptation, innovation, and evolution that moves society toward a high and sustainable quality of life—it allows people to live a life fulfilled and to be happier. The number of unemployed Nunavummiut reveals some clues to the nature of this process in Nunavut. Clearly, there are elements in the way the system attempts to move people into productive roles in the economy that aren't working.

6.1.2.1 Employment Benchmarks

Table 6-1 presents macro-level labour force statistics for the last five years. Full-time employment has made strong gains in 2013, with 700 new jobs being added to the economy. The unemployment rate is still very high at 13.6 per cent, but even this benchmark is moving in the right direction, down from 15 per cent in 2012. Also notable is the increased employment rate. This is a measure of the percentage of people employed from the entire working age population. This rate hadn't moved much in three consecutive years, but grew by one and a half percentage points in 2013.

Table 6-2 contains data for employment by industry. These figures confirm which sectors of the economy were responsible for the job growth. The increase in 2010 was largely the result of increases in the primary industries (including fishing and mining) and retail and wholesale trade. This aligns with reports from Agnico-Eagle Mines indicating 241 Inuit were working at Meadowbank by the latter half of that year. By 2011, increased exploration activities at Hope Bay, Hackett River, Back River, Izok Corridor, and Mary River further added to employment in mining. And, by 2012, the transportation and warehousing requirements of the mining sector brought increased employment to that sector. The public sector also added 225 jobs that year, after dropping over 100 one year earlier.

The annual data shown in Tables 6-1 and 6-2 can hide important information. As a demonstration, *Figure 6-2* contains monthly data on full-time employment. It shows a relatively steady growth in jobs since the recession in the latter half of 2008 and early 2009. The additional growth over the summer months of 2013 is the result of increased full-time seasonal work related to the mining and construction sectors.

These data give a general overview of the labour market. It appears that the labour market is improving but also that it is starting from a very low point, with high unemployment and low participation.

The results from the 2011 National Household Survey (NHS) show the extent to which Iqaluit, Rankin Inlet, and Cambridge Bay influence Nunavut's labour market data. Those three centres had employment rates well above the territorial average, which was a rather dismal 52 per cent according to the NHS, while all but one other community was below that average (see *Figure 6-3*). For Sanikiluaq, Hall Beach, Kugaaruk, Taloyoak, Repulse Bay, Gjoa Haven, and Arctic Bay, employment rates were below 40 per cent, meaning only 4 out of every 10 men and women of working age actually had a job.

Table 6-1

Nunavut Labour Force Activity

	2008	2009	2010	2011	2012	2013*
Total population aged 15 and over	19,600	20,200	20,900	21,100	21,100	21,600
Labour force	12,400	12,400	13,700	14,100	13,900	14,400
Employment	10,900	10,800	11,700	11,800	11,800	12,400
Full-Time	9,600	9,600	10,200	10,200	10,200	10,900
Part-Time	1,300	1,200	1,500	1,500	1,600	1,600
Unemployment	1,500	1,600	2,100	2,300	2,100	2,000
Not in the labour force	7,300	7,800	7,200	7,000	7,200	7,300
Participation rate (%)	62.9	61.2	65.5	66.8	65.7	66.4
Employment rate (%)	55.5	53.5	55.7	55.8	55.9	57.4
Unemployment rate (%)	12.3	12.6	15.0	16.5	15.0	13.6

Source: Statistics Canada, CANSIM 282-0100

Note: * 2013 data represents information up to and including November

Table 6-2

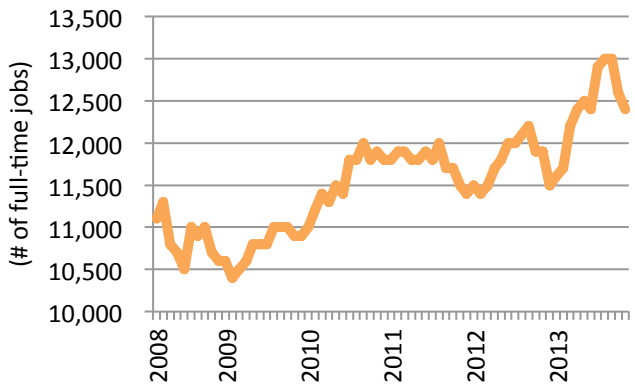
Employment by Industry, 2008 to 2012 (Nunavut's 19 Largest Communities*)

	2008	2009	2010	2011	2012
Total Employment	**10,860**	**10,775**	**11,575**	**11,767**	**11,792**
Fishing, Hunting, Trapping, Mining	320	67	383	425	475
Construction	610	575	692	717	650
Retail and Wholesale Trade	1,260	1,267	1,583	1,800	1,775
Transportation and Warehousing	570	608	600	667	833
Accommodation and Food Services	340	325	292	283	333
Public Administration, Health, and Education	5,680	5,683	5,600	5,483	5,708
Other Industries	1,980	1,950	2,258	2,342	1,958

Source: Statistics Canada, Labour Force Survey, Prepared by Nunavut Bureau of Statistics, February 12, 2013
Note: *Nunavut's 19 largest communities: Iqaluit, Rankin Inlet, Cambridge Bay, Kugluktuk, Baker Lake, Arviat, Pond Inlet, Cape Dorset, Pangnirtung, Igloolik, Taloyoak, Gjoa Haven, Kugaaruk, Coral Harbour, Repulse Bay, Qikiqtarjuaq, Arctic Bay, Hall Beach, Clyde River.

Figure 6-2

Full-time Employment, monthly, March 2008 to November 2013



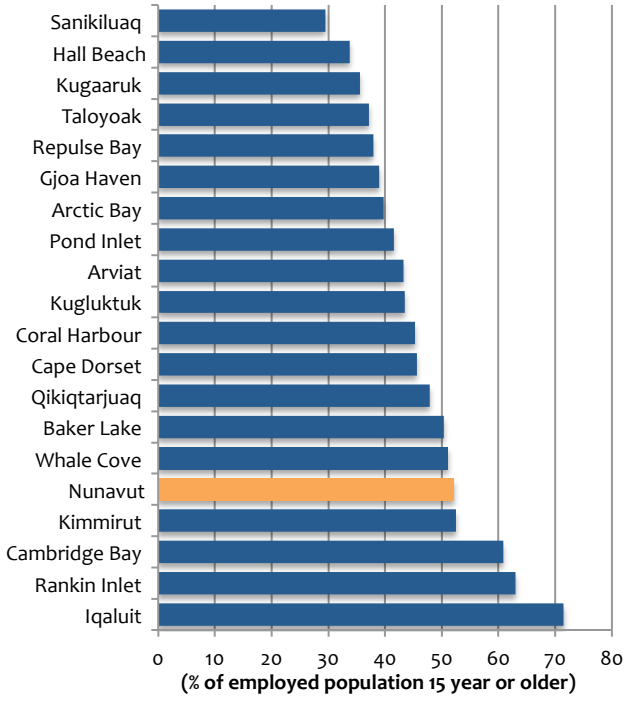
Source: Statistics Canada, CANSiM Table 282-0100

A better demonstration of the changing labour market at the community level can be observed through the data representing average monthly social assistance caseloads (see *Figure 6-4*). This is a particularly important indicator to watch, especially in communities and regions affected by resource development. The decrease shown in the Kivalliq region is almost exclusively the result of a drop in the average number of caseloads in Baker Lake, having declined from a peak of 239 in 2006 to 132 in 2012. This is a direct result of the approximately 150 residents working at the Meadowbank Gold Mine.

Note, however, that the declining trend in caseloads across the Kivalliq ended in 2012. This is what should be expected in an economy dependent on a single major project. Its start-up brings about a one-time jump in activity followed by years of relative stability. Eventually, the project reaches its

Figure 6-3

Employment Rate by Community, 2010

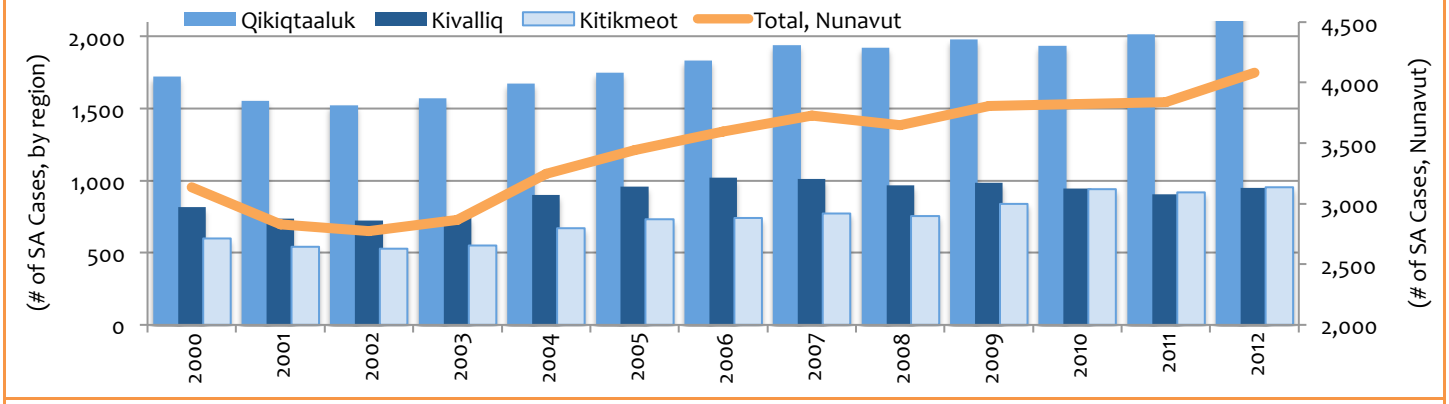


Source: Statistics Canada, 2011 National Household Survey. Community Profiles.
Note: Igloolik, Clyde River, Chesterfield Inlet, and Pangnirtung did not meet the minimum rate of participation in the NHS and therefore data collected from those communities will not be published.

maximum local employment. In a fully developed labour market, this maximum could be 90 per cent of the overall workforce. In the Northwest Territories, the diamond mines have "maxed out" the local Aboriginal and non-Aboriginal

Figure 6-4

Average Monthly Social Assistance Caseload, 2001 to 2012, by Community



Source: Income Support Division, Department of Education, Government of Nunavut.

workforce at about 60 per cent. In the Kivalliq, this point has been reached at about 30 per cent. Why the difference?

A mine, like any other industrial project, will require many hundreds of employees. But the skill set needed for each position differs greatly from one job to the next. Approximately 125 jobs at the Meadowbank Gold Mine require no more than a basic education and skill set. Nunavummiut fill almost every one of these positions. Over half the jobs require a specific skill, a professional designation, or a university degree. Nunavummiut fill about 30 of these positions.

This is how it will be at Mary River and at any other mining project in Nunavut until this fundamental labour force challenge is addressed. So, while talk of thousands of new jobs in the mining sector raises great expectations in Nunavut, it also exposes structural challenges within the workforce, as well as highlighting the number of disengaged potential labour, and the families caught in a kind of welfare trap.

The 2011 Canadian Census and the National Household Survey provide valuable information on Nunavut's financial wellbeing. However, the information depicts life at a discreet point in time, specifically, May 2010. This makes it three years out of date and therefore is best used as a tool for comparison, rather than a measure of current conditions.

6.1.3 Characteristics of Nunavut's Unemployed Labour

6.1.3.1 Frictional Unemployment

A portion of Nunavummiut who are not working are frictionally unemployed; that is, they are moving between jobs or are new workers entering the labour market and have not yet found a job. This form of unemployment is always present in an economy where labour is free to move. Any estimate of full employment must acknowledge the presence of these people.

There isn't a recognised or accepted estimate of frictional unemployment in Nunavut. Lowering this rate is not typically a subject for public policy or a concern in general. It is noted here in order to clarify the different characteristics of unemployed people. All other forms of unemployment are issues of public policy.

6.1.3.2 Structural Unemployment

Structural unemployment exists when a discrepancy appears between the number of people unemployed and number of available jobs; that is, the number of job openings is equal to or greater than the number of unemployed people, but due to a mismatch of skills or an issue of location (unemployed people are not living where the jobs are and are unwilling or unable to relocate), these people remain unemployed. This discrepancy can occur when an economy has undergone a fundamental change in the composition of its overall production with the new economy needing a different set of skills and education from its workforce.

The term structural unemployment is best suited for situations where jobs have been removed from a community and

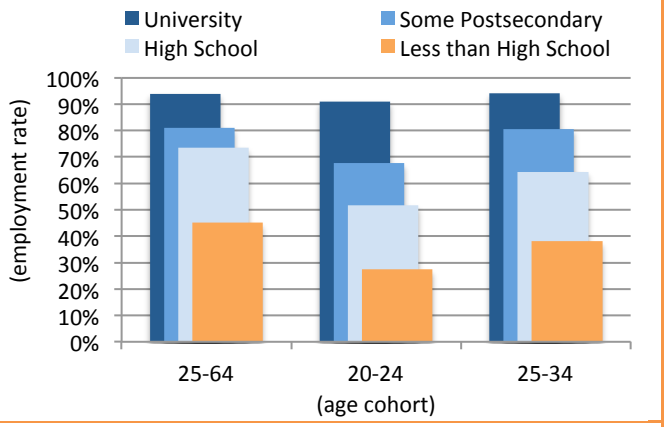
the employees who have lost their jobs are unable or unwilling to retrain or relocate. Structural unemployment is common in communities that have lost their manufacturing base, putting a lot of plant workers out of work who are not trained for other jobs.

This definition might not seem to be a good fit for every community across Nunavut where the jobs didn't exist previously. But if the definition is widened to include the non-wage economy and a time when all Inuit were 'fully employed' in the pursuit of subsistence, then the new modern-day wage economy has certainly created structural unemployment. There is a clear mismatch in skills between the supply of Inuit labour with skills that are highly valued in the non-wage economy and a demand for labour with skills in literacy, numeracy, and modern technology.

This gap is clearly evident when looking at the education levels of employed Nunavummiut (see *Figure* 6-5). For young people under the age of 25 who have not graduated from high school, the chance of being employed is less than 30 per cent. A high school education improves employment rates to 50-70 per cent. Adding some form of post secondary education improves employability further to 70-80 per cent. A university degree all but ensures employment, with employment rates in the range of 90-95 per cent.

Figure 6-5

Employment Rate by Education and Age-Cohort, 2010



Source: Statistics Canada, 2011 National Household Survey

For the majority of jobs being created in today's economy, additional skills and training or a professional designation is required. This is as true for Nunavut as it is anywhere in |Canada. Education attainment is clearly a key factor in human capabilities, but is presented here because it exposes the structural nature of unemployment across Nunavut.

For Nunavummiut who have the education and skills, but are nevertheless unemployed, the challenge truly is a lack of job creation in their community. Or is it? Relocating to a community or region where jobs are more plentiful should be an option for such individuals and families, but can be difficult in Nunavut. Poor labour mobility is another structural problem.

This challenge has been partially addressed in the mining industry with the advent of fly in/fly out (FIFO) work sites. But there are still limitations. Flights in and out of these mines are typically limited to nearby communities. For instance, Agnico-Eagle Mines will fly workers to Meadowbank from any of the seven Kivalliq communities. This broadens the labour pool from what is available at Baker Lake to a population of 8,500 residents. From that pool of labour, AEM employs 225 Inuit.

The three diamond mines operating in the NWT offer travel incentives to *anyone* living in *any* of the 33 NWT communities. This expands the reach of the employment opportunities to the entire population of 43,500. At its peak, these three mines employed 1,600 NWT residents (850 Aboriginal residents and 750 non-Aboriginal residents).

The point is that the FIFO approach can work to widen local Inuit employment, but is limited by the number of communities a company will fly to. But it is also limited by other structural problems such as the mismatch in skills. Inuit already fill all the entry-level jobs at the Meadowbank mine. Expanding the number of pick-up points will only result in more employment if there are Nunavummiut in those other communities who qualify for jobs currently filled by non-residents. The two issues must be addressed simultaneously.

True mobility (having the ability to move to where a job exists) is difficult for Nunavummiut because of the lack of roads and because of a dependence on public housing. Moving is not a simple case of packing up the car and driving to the next community. And even if it were, the vast majority of unemployed residents of Nunavut live in public housing. To move requires that the family gives up their current home and apply for another in the next community. This is not a simple transition. There is a serious shortage of public housing with thousands already on waiting lists for new units. For those who choose to move anyway, many end up living with extended family adding to the overcrowding of homes. This is precisely what happened and is still happening in Baker Lake.

Clearly, structural unemployment is a big challenge.

- The education deficit is proving difficult to address, and consistently poor graduation rates mean that participation rates for skilled jobs will remain low well into the future.
- Improving mobility requires dramatic changes to the housing market, which has its own set of challenges.

Structural unemployment is characterised by a long transition period and high costs of matching unemployed labour with existing jobs through education, retraining, and relocation programs. How to transport, house, and integrate labour from economically-depressed regions to areas with excess labour demand and who pays are difficult but necessary questions to investigate.

6.1.3.3 Disengaged Labour

In order to participate in the labour force, an individual has to want to be a part of it. The impact of cultural change and the resulting social exclusion cannot be disregarded as an impediment to bringing Nunavummiut into the wage economy. Amongst the total number of unemployed Nunavummiut is a group of people that have somehow lost their way in the transition over the past 50 years from a non-wage economy that values family, community, and sharing, and requires traditional or subsistence skills to a wage economy that values individual performance, material wealth, and career ambition, and that brings many financial pressures.

It is not easy to identify this group within a population. These individuals may or may not have completed high school and will take part-time, seasonal, or temporary jobs from time-to-time, which makes it difficult to separate them statistically from those who legitimately want employment but are just unable to find work and have given up looking. It is also important to separate these people from Inuit who have chosen a largely traditional lifestyle and do not seek wage employment on a regular basis.

The number of disengaged or disinterested labour can rise in situations where there are no youth employment opportunities that are essential in acquiring basic workplace skills. In its absence, years of income support can take its toll on an individual's ability and interest in work.

Opting out of the workforce is a new phenomenon amongst Inuit since it would not have been an option previously. Survival in the pre-colonial economy required everyone's participation.

Nothing breeds unemployment faster than unemployment, and the longer unemployment lasts, the greater the likelihood of future unemployment. Put differently, long–term welfare dependence inhibits a transition to self-reliance and economic self-sufficiency (Savoie 2001).

6.1.3.4 Welfare Trap[11]

It is difficult to identify who amongst the unemployed are disengaged and those who have fallen into a welfare trap. It is also possible that one leads to the other. A welfare trap is a situation whereby elements within the social safety net create a disincentive for people to take a paying job. Traditionally, the disincentive can be established when:

- social assistance programs are too rich – they exceed what people can earn in the wage economy; or,
- social assistance programs include penalties on earned income that are too harsh – this comes in the form of welfare payback penalties or income tax rates on low income earners that are too high.

The concept of a welfare trap was inappropriate for Nunavut for years because it assumes jobs are available, giving a welfare recipient the option to work. Until recently, there were few jobs available, especially in communities without any resource development or a large government presence. The lack of employment options remains a challenge for some communities, but not to the extent it once was. For welfare recipients living in communities where jobs are being created, the possibility of a welfare trap now exists for real.

There are several factors that can create a welfare trap that go beyond its technical definition, but weigh heavily on a person's choice between work and social assistance. Take for example an individual who receives income and housing support. This person receives support without having to work in the formal economy. If and when a job opportunity appears, he or she will assess the merits of that job by evaluating the marginal gains it will provide; that is, the difference between what would be received from the new job after subtracting any applicable taxes and what they currently receive through welfare. The person would factor in the costs associated with any physical and mental effort

[11] The welfare trap discussion was originally presented in the Understanding Poverty in Nunavut report.

required to perform the new job. He or she will account for the hours spent on the job and in transit, and any additional expenses (real or in kind) incurred because of the job, such as the cost of daycare, cost of commuting, or the opportunity cost of spending less time with family or having less time to participate in traditional economic endeavours. In other words, a full-time welfare recipient will require that a new job pay more than what they currently receive through income support. Depending on the cost-benefit evaluation of work versus welfare and any additional aversion to risk, the required wage may have to be substantially higher than the 'pay' currently received from income support to justify a decision to leave welfare.

It should be understood that an individual's decision to remain on welfare can be rational and well informed. It depends not only on the level of income support and the policies that influence it (the technical definition of a welfare trap), but also on such things as the minimum wage, what work the individual qualifies for, the cost of living, the financial implications of public housing, the availability of other public sector services, and the affordability of private sector services.

With this expanded view of the welfare trap, it is easy to understand just how complex it is, and how many different stakeholders must be involved in finding a solution. Considering the new Framework for Development, it is also easy to see how the solution to the welfare trap is the same solution needed to address structural unemployment issues, improve workforce participation, and sort through the issues facing public housing. In a complex system, all of the parts are understood in terms of how they work together.

Social assistance should provide individuals and families with the appropriate financial resources to meet their basic needs. In theory, any amount over this level creates an "incentive" for some recipients to remain on government support even if they are able to work. Any amount less would result in the recipients becoming destitute without enough money to survive. The challenge is in determining the appropriate level of support.

- How are "basic needs" defined?
- Are these basic needs the same for everyone?
- Can and should the program differentiate between welfare recipients who are
  a) caught in a welfare trap,
  b) capable of work but have become disengaged from the wage economy,
  c) living in a community where there is no job creation, or
  d) making a conscious choice to not participate in the wage economy, and instead, choosing to work in the non-wage economy?

Eliminating the welfare trap requires that the economy provide appropriate job opportunities, that minimum wage is enough to entice people away from welfare (rather than becoming the working poor), that social housing programs not act as a disincentive to work, and that the community provide an array of affordable non-profit, public, and private sector services. In other words, eliminating the welfare trap requires a complex system working together on a multitude of issues that go beyond reforming the welfare system.

6.1.4 Income

The previous discussion in section 6.1.3 revealed that there are economic opportunities in Nunavut, but that issues of mobility, mismatched skills, social exclusion, workforce readiness, housing, and basic education are limiting full participation. Instead of local labour, job tourists meet the demand for a skilled and mobile labour force. The lack of participation means potential income is lost with negative implications for personal and family income. It also increases the need for social assistance and public housing, and contributes to higher levels of poverty.

However, past editions of the Nunavut Economic Outlook have also pointed to a growing middle class in Nunavut, that there are more and more graduates of high school and university (in absolute terms), and there are many financially successful Nunavummiut. This too can be seen in the most recent employment data, and is showing up in the income data as well.

Together, the families that are falling further and further behind and those that are doing better and better are widening the gap between rich and poor. Income inequality is increasingly being seen as an impediment to economic growth and can interfere with efforts to reduce poverty.

6.1.4.1 Total, Average, and Median Income

The rising middle class is evident from the total and average income data. Total personal income, defined as all wages and salaries, transfers from government, and other sources of income such as rent, has grown to equal the national average when taken in relative terms (see *Figure 6-6*).

These improvements in average income were also reflected in the 2011 NHS results. Average after-tax income for all income earners aged 15 and older was reported as $37,249 (see Table 6-3). Not only is this well above the national average of $33,998, it is also the fourth highest in the country after the Northwest Territories, Yukon, and Alberta. This is a significant increase since the 2006 Census was taken when average income was lower than the national average (Statistics Canada 2008). It is a good indication of the higher employment numbers and increased participation of Nunavummiut in high paying jobs over the past five years.

One of the biggest challenges for Nunavut is in the distribution of income, both within and between communities. Average income in the territory is high. But from *Figure 6-7* it is apparent that a majority of the higher paying jobs are found in Iqaluit, where 13 per cent of the population aged 15 years and older with recorded income made more than $100,000 after taxes in 2010 whereas fewer than 4 per cent of Nunavummiut living elsewhere earned incomes at this level. Meanwhile, 48 per cent of income earners living outside Iqaluit registered after-tax incomes below $20,000 compared to 26 per cent in Iqaluit.

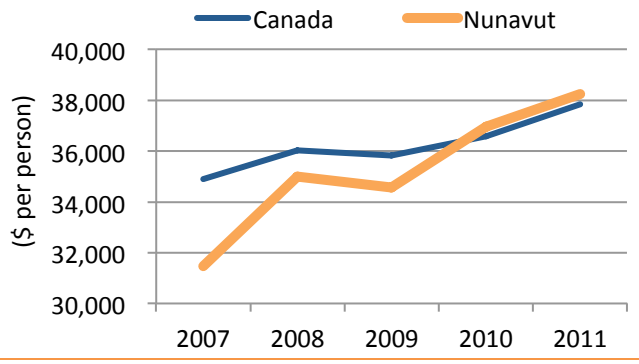
The 2011 NHS income data also provides an estimate of median income. Median income is the income level from which there are equal numbers of people above and below the amount. The survey showed median after-tax income for income earners was $24,868 in 2010. Quite the opposite of average income, this amount represents the third lowest median income of all provinces and territories, above New Brunswick and Newfoundland and Labrador.

Median income is a statistic often used when studying poverty. The difference between average and median income is a measure of income inequality and wider gaps are often associated with increased cases of poverty. This gap is wider in Nunavut than anywhere else in the country, and by quite a large margin (see *Figure 6-8*).

It is possible to imagine scenarios that produce this result that are not instances of poverty. For example, one billionaire living amongst a group of middle-income residents

Figure 6-6

Personal Income, per capita, 2007 to 2011



Source: Statistics Canada, CANSIM Table 384-0040 and 051-0005.

Table 6-3

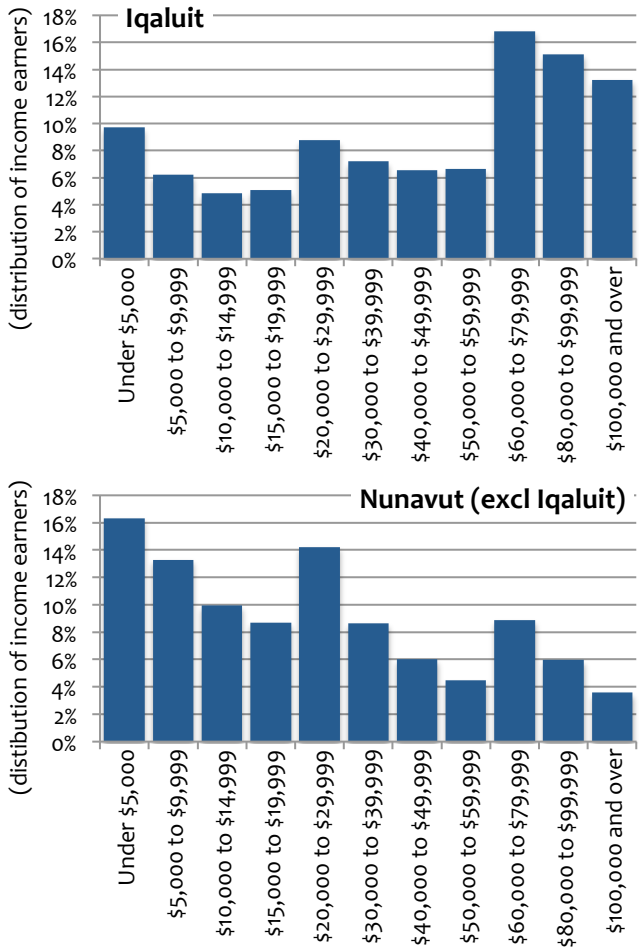
Average and median income, after-tax, Canada and Nunavut, 2010, $ per person, 15 years of age and older

	Nunavut	Canada
Average Income	37,249	33,998
Median Income	24,868	27,334

Source: Statistics Canada, 2011 National Household Survey, Catalogue no. 99-014-X2011040

Figure 6-7

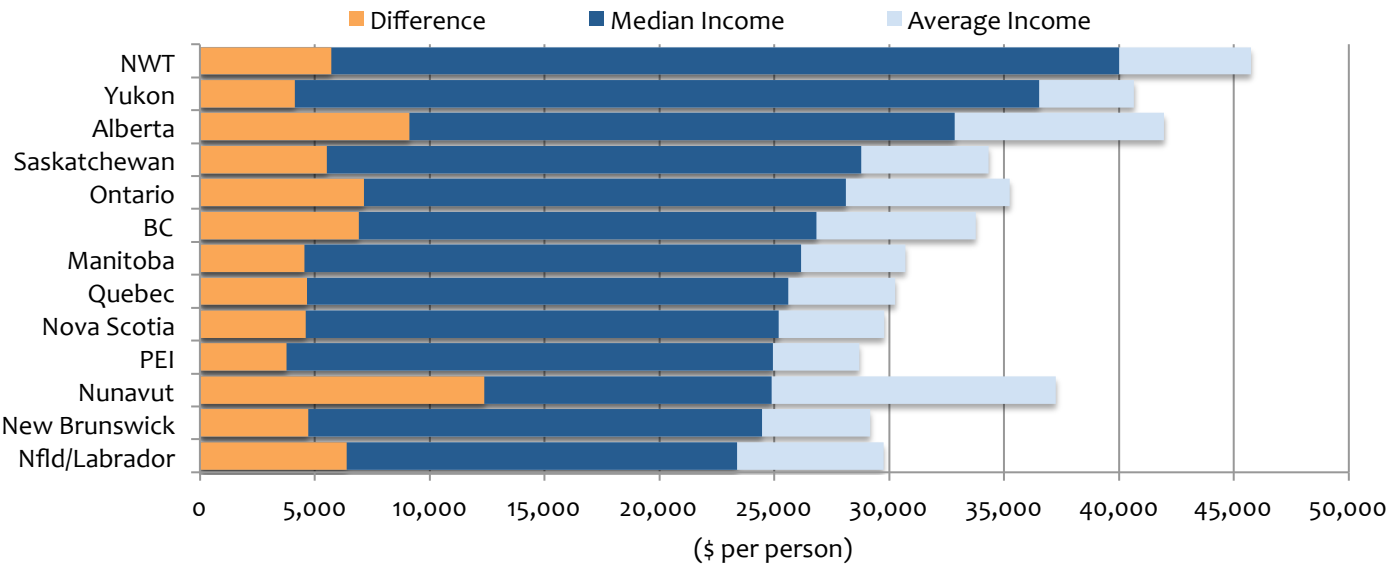
After-Tax Income of Individuals Aged 15 and over, 2010



Source: Statistics Canada, 2011 National Household Survey. Community Profiles.

Figure 6-8

Average and Median Income, by Province and Territory, 2010



Source: Statistics Canada, 2011 National Household Survey, Catalogue no. 99-014-X2011040.

would create a mathematical result that shows all but the one wealthy person is living with an income below the average and that the difference between the average and median income is significant. This is a case of income inequality but not poverty.

With that said, there are numerous examples where income inequality is correlated with high rates of poverty. This was one of the conclusions illustrated in *Understanding Poverty in Nunavut.* That report connects the high rate of dependence on income and housing support programs, low employment rates, incidents of food insecurity, and income inequality with poverty in Nunavut (Impact Economics 2012).

Income inequality is also being studied as an indicator of numerous challenges facing a country's development, including health and social problems, criminal activity, abuse, education, and economic growth (Wilkinson and Prickett 2011). Research is showing that in rich countries, a smaller gap between rich and poor means a happier, healthier, and more successful population (The Equality Trust 2012).

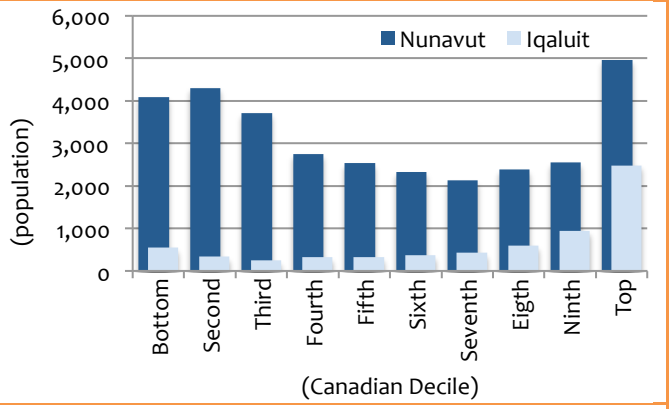
The Low Income Measure (LIM) is a relative measure of poverty that utilizes median income statistics. The measure sets the financial poverty threshold for families at an income level 50 per cent below the median income. It is unlikely that a family living with an income below that amount would be able to afford the necessities required for the most basic life. It is a measure that should be taken at a local level if possible in order to account for differences in cost of living and social norms.

As a part of the 2011 NHS, Statistics Canada has organized family income data of all Canadians from richest to poorest making adjustments for family characteristics. The data were organised according to deciles (groups representing 10 per cent of the entire population). *Figure 6-9* shows where on the list Nunavut's families are on that scale. Data for Iqaluit is presented as a part of Nunavut and on its own to demonstrate its unique position within the territory. Almost 5,000 Nunavummiut—16 per cent of the population—find themselves in families positioned in the top decile amongst other Canadians with half of these people living in Iqaluit. To be in the top decile means these families are amongst the richest in the country—though this measure does not make adjustments for cost of living (to be discussed later) or the inequality within this top decile.

The number of Nunavummiut in the bottom half exceeds 17,000 or 55 per cent of the population, with over 4,000 of these people living in families with incomes in the bottom decile.

Figure 6-9

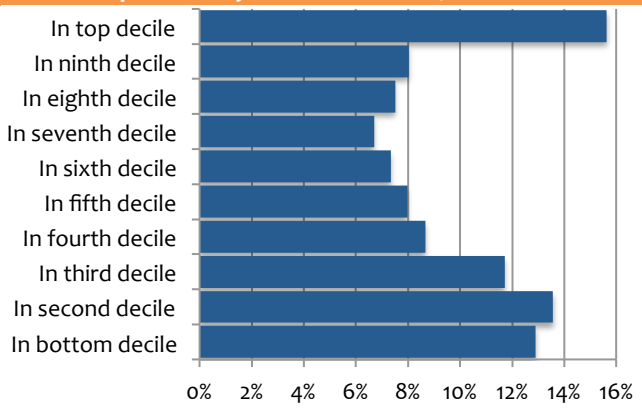
Population, by adjusted after-tax family income, Ranked according to Canadian decile, Nunavut and Iqaluit, 2010



Source: Statistics Canada, 2011 National Household Survey. Community Profiles.

Figure 6-10

Adjusted after-tax family income, Percentage of Nunavut's Population by Canadian Decile , 2010



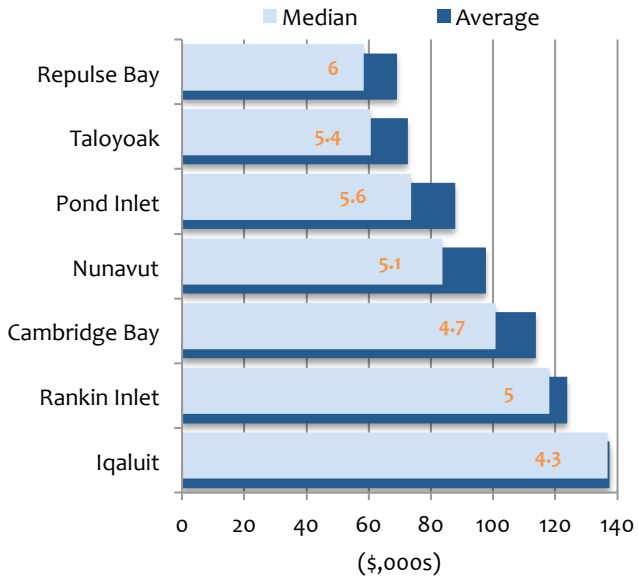
Source: Statistics Canada, 2011 National Household Survey. Community Profiles.

Figure 6-10 further illustrates the uneven distribution of income. Across Canada, an equal number of people are in each grouping (10% in each). In Nunavut, it is clear that the majority of people find themselves near the top or near the bottom. Again, these figures have not been adjusted for the cost of living, which would reduce the purchasing power of family income for all Nunavummiut.

Drilling down even further, it is possible to learn more about the families at the top and bottom of the income scale. *Figure 6-11* contains 2011 NHS data from several communities in Nunavut showing differences in median after-tax incomes for families consisting of two parents and at least one child. A number of patterns emerge even from this small sample of communities. Families in Iqaluit are smaller and financially wealthier than those living in the other two regional centres,

Figure 6-11

Average and Median Income and Average Family Size* of couple families with two parents and at least one child, Select Communities, 2010



Source: Statistics Canada, 2011 National Household Survey. Community Profiles.
Note: *Average family size is shown numerically in line with each community. The family size is the average of all families with two parents and at least one child. Data for other family types is available in the 2011 NHS.

whereas families living outside these three centres are generally larger and significantly less wealthy.

6.1.4.2 Purchasing Power or "What Money Can Buy"

Income levels by themselves do not provide a complete picture of financial wellbeing. Increased freedom is derived not from money but from what money can buy. Cost of living in Nunavut is high, which lowers the purchasing power of income when compared to lower cost regions. The distribution of income has already been highlighted, with Nunavummiut crowding into the top and bottom income groups. Particular attention should be given to the latter group given that these people are at risk of or already experiencing financial poverty.

Determining the purchasing power of a dollar is difficult to the point where a precise calculation is virtually impossible.

- The calculation requires a uniform basket of goods and services to compare with other Canadian jurisdictions and across Nunavut's communities.
- There is also the challenge of dealing with substitution, which is when one item in the basket is substituted with another.

A Case Study of Pond Inlet

The case of Pond Inlet can be used to highlight Nunavut's challenges with economic growth and development.

Median income in that community is not the lowest in the territory, but is nevertheless very low. The community is also home to some of the largest families with an average of 5.6 members per immediate family. Again, there are communities with larger families, on average, but Pond Inlet is amongst the leaders.

Pond Inlet recently received the much-anticipated news that Baffinland had made the decision to develop its Mary River Iron Project. The data from the 2011 NHS suggests that Pond Inlet needs the income from this project as much if not more than most other communities, but its family dynamics suggest participation will be challenging for those that need it most. Consideration of other social and economic data only adds to the complexity of the situation.

For Pond Inlet to truly benefit from this economic growth opportunity, it will have to establish an equally complex system to manage and promote its development.

- The financial contribution of the subsistence economy must also be considered, requiring a valuation of the inputs and outputs of harvesting and making adjustments for nutritional content.
- The prevalence and richness of public programs is another complicating factor. In Nunavut, close to 60 per cent of the population lives in public housing with another 22 per cent living in government housing (subsidised housing for government employees). This eliminates or at least reduces housing from a family's basket of goods, meaning more money is available for the remaining items.

A better approach is to look at different pieces of information to build an (albeit more general) understanding of the value of money in Nunavut. The purchasing power of a dollar is reduced by the high cost of food, energy, private housing, transportation, and construction. Examples of the lower purchasing power are provided below:

- Food costs can be twice as high as in urban centres in Canada (see **Table 6-4**).

Table 6-4

Weekly cost of the Revised Northern Food Basket for a family of four

Reference Locations[2010]	Total
Ottawa	$226
Winnipeg	$242
Edmonton	$254
Nunavut Locations	
Iqaluit[(2010)]	$398
Other Baffin Communities[(2008-10)]	$435
Kivalliq Communities[(2010)]	$425
Kitikmeot Communities[(2009)]	$451

Source: Regional results from price surveys (http://www.ainc-inac.gc.ca/nth/fon/fc/rgrs-eng.asp#bffn)

- The cost of electricity is five to ten times higher than metropolitan centres—power costs for residential customers can range from 55.01¢ per kWh in Iqaluit to $1.0785 per kWh in Kugaaruk (see **Table 6-5**) (Qulliq Energy Corporation 2011).

Table 6-5

Nunavut's Power Rates, non-government, effective April 2011 (select communities)

	Domestic	Commercial
Iqaluit	55.01¢	45.59¢
Cambridge Bay	70.48¢	60.68¢
Pond Inlet	84.09¢	77.16¢
Kugaaruk	107.85¢	95.69¢

Source: Qulliq Power Corporation; prices quoted include 5% GST

- Water and sewage are trucked to and from homes in most communities. This is an extremely inefficient and costly way to provide these services. The provision of water to public housing represents 29 per cent of the total operating budget for these units and equals $6,800 annually, on average.
- The absence of roads means that residents of smaller communities cannot travel to larger communities to access bigger stores and more competitive prices.
- No roads also mean the only mode of inter-community and inter-regional transportation is by air (though boats and snowmobiles are used).
- The cost of construction for a 900 square-foot, government-built, row house exceeds $350,000. Alternatively, if you must rent an apartment in Iqaluit, for example, one is confronted with the highest rental

rates in the country, with a two-bedroom unit renting for $2,265 per month, equal to $27,180 annually (Kendall 2011).

These price comparisons confirm that a dollar in Nunavut does not equal a dollar elsewhere in Canada in terms of its local purchasing power. However, one must account for such things as differing food choices, clothing requirements, entertainment options, transportation needs, family size, tax regimes, cultural norms, and consumer habits. How consumers respond to the higher prices—that is, how consumers substitute goods and services as a result of the extreme cost of certain items—must be accounted for in some way. These factors complicate the calculations, but are important to note because in some cases they imply a lower cost of living for certain purchases.

Statistics Canada conducts an annual *Survey of Household Spending* (Statistics Canada 2013). However, as of 2010, the three territories are no longer included. This leaves data from 2009 as the latest available to assess differences in household spending between Nunavut and other Canadian jurisdictions (see **Table 6-6**).

At that time, average consumption by Nunavut households was 20 per cent higher than the national average, with the average spending on shelter actually below the national average. This latter result is skewed by public housing, which represents approximately 50 per cent of Nunavut's housing stock, and the use of subsidised government housing by public servants, which accounts for another 22 per cent of the housing stock. The survey results also exclude the fact that the cost incurred by the Nunavut Housing Corporation for the operating and maintaining its public housing units is $23,800 per house.

For the sake of comparison, it is best to exclude the cost of housing. The result is that average household spending in Nunavut is just shy of $44,000 compared to $33,000 across Canada.

This exercise does not result in a definitive answer to the question of purchasing power in Nunavut compared to other jurisdictions, but is strong evidence that the cost of living in Nunavut can be as little as 30 per cent higher than the Canadian average, but depending on location, local spending patterns, and housing tenure, cost of living could be as much as 50 per cent higher and perhaps even more.

Table 6-6

Average Household Expenditures, Nunavut and Canada, 2009

	Nunavut		Canada	
	Average expenditure per household	Households reporting expenditures	Average expenditure per household	Households reporting expenditures
	$	%	$	%
Total expenditures	**84,439**	**100**	**71,117**	**100**
Total current consumption	60,900	100	50,734	100
Food	14,815	100	7,262	100
Shelter	12,824	98.5	14,095	99.8
Household operation	4,285	100	3,428	100
Household furnishings	2,400	96.2	1,896	92.2
Clothing	4,257	98.5	2,841	98.9
Transportation	6,372	69.9	9,753	98.1
Health care	711	78.7	2,004	97.2
Personal care	1,220	99.6	1,200	99.7
Recreation	6,698	98.3	3,843	97.4
Reading and printed materials	143	40.1	232	68.7
Education	*	*	1,238	33.1
Tobacco and alcoholic beverages	4,806	89.7	1,506	82.6
Games of chance (net amount)	452	66.9	255	67.2
Miscellaneous	1,354	67.2	1,180	91.5
Personal income taxes	15,781	90.4	14,399	93.4
Personal insurance and pension	5,198	87.8	4,269	83.7
Gifts of money and contributions	2,560	65.6	1,715	72.6

Source: Statistics Canada, Survey of Household Spending, CANSIM Table 203-0021 (this survey no longer includes Nunavut)
Note: * unreliable data

The point of this demonstration is to help understand the state of financial wellbeing in Nunavut. By taking the assumption that Nunavut's cost of living is 30 per cent higher, average and median incomes of Nunavummiut would have to rise from $37,249 to over $44,000 and from $24,868 to $35,000, respectively, to be on par with the average Canadian.

This assumption can also be applied to the study of poverty when determining an appropriate LIM or other poverty thresholds.

High Prices or Low Incomes?

Prices in Nunavut are extremely high. However, prices are largely determined by the cost of selling goods and services, which includes the manufacturer's price of that good, and the retailer's cost of labour, heat, electricity, rent, transportation, and storage. No doubt, the lack of any economies of scale and the lack of competition contributes to the higher prices, but there is no evidence that corporate profits are disproportionately high in comparison to the rents paid to labour and capital.

In a functioning market, there would be downward pressure on prices, but there would also be upward pressure on incomes. Average wages have risen in Nunavut as has the average wage paid to professionals

The problem is that too few Nunavummiut qualify for these higher paying jobs. Many are forced to choose between a minimum wage job and welfare. With either choice, these families will find prices are too high.

Drawing attention to high prices will not have much impact on the market. It is possible that government could respond to pressure from citizens with increased subsidies or higher income support. But neither solution is optimal.

A far more productive response would be to give greater attention to the development of Nunavut's human capabilities, social inclusion, and sustainability; that is, a concerted effort to develop Nunavut. A system that is united in its focus to take better care of young children, to educate students, and to create safe and healthy homes and communities will improve workforce participation effectively reducing concerns regarding high prices. Such actions would have numerous other benefits as well.

6.2 HUMAN CAPABILITIES

An important contributor to society's collective wellbeing is its capacity to ensure everyone is able to pursue opportunities and has the ability to make good decisions. When discussing human capital, it is easy to narrow the definition to those skills and attributes that contribute to a region's gross domestic product. But success and happiness is equally dependent on health, knowledge, education, skills, and lifelong learning that enable people to succeed in all aspects of their lives inside and outside of the wage economy. Greater capabilities can improve a society's ability to cope with, adapt to, and ultimately prosper from changes in their environment, while low levels of education and human capabilities can contribute to bad choices, such as those associated with money, lifestyles, and diets. Greater capabilities make society more resilient and are a foundation for building complex, adaptive systems that enable society to achieve its goals.

Similar to the role of money, society's capabilities influence all aspects of life and the movement towards its development goals. In the previous section, it was shown that the number of jobs available throughout Nunavut does not warrant the number of unemployed Nunavummiut unless education and skills are considered. It is true that other factors are relevant. Mobility, housing, and a welfare trap contribute to the state of unemployment. Some Nunavummiut have had difficulty in the transition to the wage economy, while others have chosen to pursue traditional subsistence activities rather than participate fulltime in the wage economy. But most jobs created in today's economy require more than just a high school diploma, most are technical in nature or require applied knowledge, and all demand highly developed literacy skills and a commitment to continual learning. Too many Nunavummiut don't have these skills and therefore do not qualify for the new jobs; a fact that cannot overlooked or overshadowed by the other factors cited earlier.

Instead of a life fulfilled, the result is a life of poverty. Furthermore, these elements that work together to keep Inuit out of the workforce and reduce or eliminate their freedom are also the key determinants of health, which is another area of human capabilities where Nunavummiut trail most other Canadians. The result is a vicious cycle of poor participation and performance in school and at work, low incomes, more stress, and heightened poverty, dependence on income support and social housing, an increased aversion to risk, and finally an absence of choice (freedom) including the opportunity for healthy living (including diet, exercise, hab-

its, etc.), all of which results in a further deterioration of health.

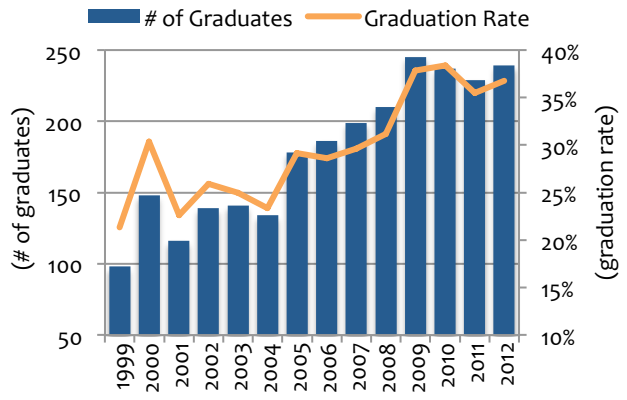
The loss of traditional skills and knowledge can also contribute to a deterioration of life in Nunavut and to poverty in areas such as social exclusion and food insecurity. This idea is discussed further in the chapter on sustainability.

6.2.1 Education

The performance of Nunavummiut in school remains a central concern when evaluating Nunavut's progress toward its development goals. Nunavut's graduation rate of 35 per cent to 40 per cent, while an improvement from a decade ago, remains abysmal (see *Figure 6-12*). At this rate, Nunavut's performance is below the worst performers amongst all OECD countries (OECD 2011).

Figure 6-12

Number of Graduates, 1999 to 2009



Source: GN Department of Education.

There is a wealth of data and analytical reports espousing the virtues of education. Higher levels of education are closely correlated with greater participation in the workforce and higher pay whether in Canada or in other leading industrialised countries (see *Table 6-7*, *Figure 6-13*).

An interesting result from the 2011 National Household Survey was that Nunavut had the highest employment rate for university graduates at 93 per cent and the second lowest employment rate (45.1 %) for those without a high school certificate (Statistics Canada 2013).

This correlation is readily apparent from the labour market data presented in Chapter 6.1 on Financial Wellbeing where it shows a surplus of jobs while thousands of Nunavummiut remain unemployed. Inadequate or mismatched skills are only a part of the reason for this gap, but one of the most important ones. The report *Understanding Poverty in Nunavut* found the low levels of education, whether formal or traditional, was one of the most serious issues facing Nunavut's efforts to reduce poverty (Impact Economics 2012). The divide between haves and have-nots in Nunavut can be traced almost precisely along the same line that separates those with and without at least a high school education. What makes the issue more serious than anywhere else in the country is the fact that 46 per cent of the population aged 25 to 64 are without this level of education, by far the worst performer in the country, and the graduation rates are doing little to alter that ratio (see *Figure 6-14*).

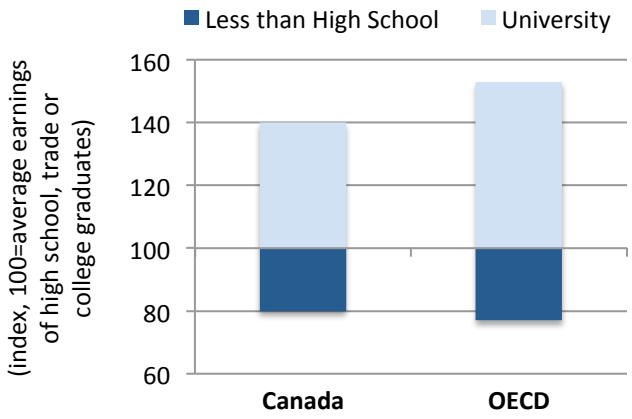
> Nowhere else in Canada is an education more relevant to a person's employment and financial wellbeing than in Nunavut.

Education is not simply a means to employment. Higher levels of education have been shown to be a significant, posi-

Figure 6-13

Earning Premiums from Education, 25-64 year-olds, 2009

(relative to average earnings of High School, Trade, or College graduates)



Source: OECD (2011), *Education at a Glance 2011: OECD Indicators*

Table 6-7

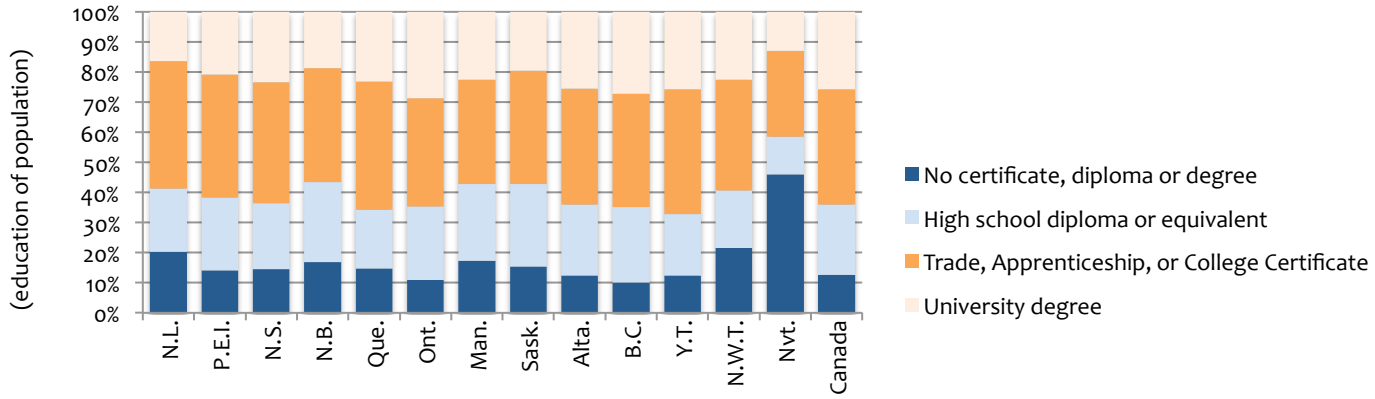
Employment Rates of 25-64 year-olds, by education, 2009

	Canada	OECD
Less than High School	55.1%	56.0%
High School, Trade, or College Certificate	73.7%	74.2%
University	81.7%	83.6%

Source: OECD (2011), *Education at a Glance 2011: OECD Indicators*

Figure 6-14

Distribution of Population Aged 25 to 64, by Level of Education Attainment, Canada, Provinces, and Territories, 2011



Source: 2011 National Household Survey

tive factor in a person's civic engagement, their propensity to volunteer, the likelihood they will vote, and in their self-assessment of life satisfaction. Studies in OECD countries also show one's perceptions on ethnic and gender equality are also highly correlated with their education (OECD 2011).

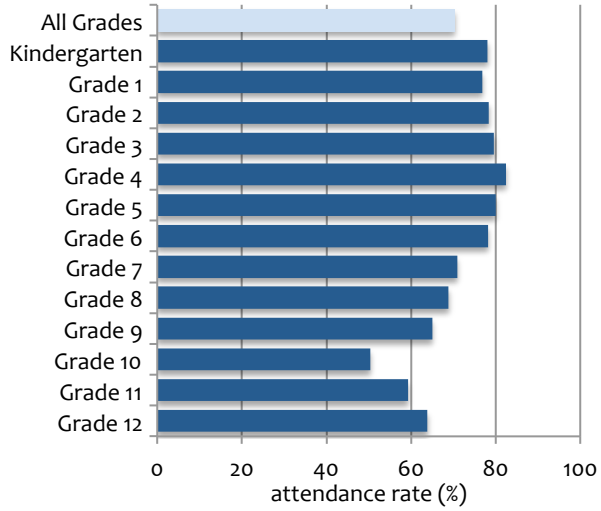
Perhaps most important of all, education has been shown to be a key social determinant of health. The primary factors that shape the health of Canadians are not medical treatments or lifestyle choices but rather the living conditions they experience (Mikkonen and Raphael 2010). Education has an enormous influence over one's living conditions. There is also a direct relationship between literacy and understanding how to promote one's own health through individual action.

To understand the poor results in education, one needn't look any further than Nunavut's public school attendance records. Nunavut children are simply not going to school on a regular basis. In the 2010-11 school year, only one grade shows an attendance record greater than 80 per cent, and by grade 7, attendance is below 70 per cent. For grades 10 and 11, attendance is below 60 per cent (see *Figure 6-15*). It is also worth noting that overall attendance is not improving with time (see *Figure 6-16*).

These statistics are not going unnoticed, of course. The Government of Nunavut has consistently increased its investment into education. Over the past five years, spending on public school operations has grown by 35 per cent, equal to an annual average increase of 7.8 per cent and almost twice the average rate of increase across Canada (see *Table 6-8*). More importantly, spending per student has grown at

Figure 6-15

Nunavut Public School Attendance Rate, by Grade, 2010-11

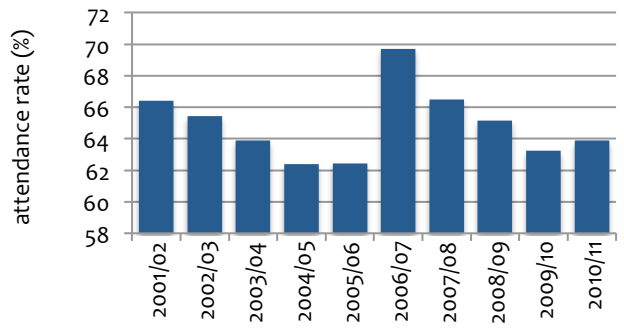


Source: Department of Education, Government of Nunavut. Prepared by Nunavut Bureau of Statistics, 2012.

Comparing Nunavut's per capita spending with the rest of Canada is common practice. However, we should understand that the economies of scale in Nunavut are virtually nil, making all of GNs spending appear high on a per capita basis. This type of measurement can inform us on the relative change in comparison to other jurisdictions, but not on the adequacy of spending.

Figure 6-16

Nunavut Public School Attendance Rate, 2001-02 to 2010-11



Source: Department of Education, Government of Nunavut. Prepared by Nunavut Bureau of Statistics, 2012.

the same pace. As of the 2009-10 fiscal-year, Nunavut was spending a nation-leading $15,794 per K-12 grade student.

This discussion on the state of education in Nunavut is decidedly focussed on formal or instituted education. This might be seen as a departure from the original Nunavut Economic Outlook that described the continued relevance of education associated with Inuit traditions and culture. The importance of maintaining a cultural link is difficult to quantify precisely, but is a fundamental part of the preservation of any ethnic group in the world.

In Nunavut, living a largely subsistence lifestyle remains a viable alternative to participation in the wage economy, so long as society accepts (and it does) that some financial support through income redistribution is a part of it. This means an education in traditional Inuit practices and knowledge is more than just an attempt to hold onto traditions, it is a means to making a productive contribution to society.

Table 6-8

Operating expenditures in public elementary and secondary schools, Canada and Nunavut

($, millions and per student, and year-over-year per cent change)

	2005-06	2006-07	2007-08	2008-09	2009-10
(total expenditures in current dollars)					
Canada	43,044	44,768	46,468	49,318	51,257
(%)	5.7	4	3.8	6.1	3.9
Nunavut	101.9	115.8	121.1	128.6	137.3
(%)	4.6	13.6	4.6	6.2	6.8
(average expenditure per student)					
Canada	8,807	9,251	9,714	10,414	10,880
(%)	6.5	5	5	7.2	4.5
Nunavut	11,610	13,273	13,926	14,420	15,794
(%)	7.3	14.3	4.9	3.6	9.5

Source:

There are, however, fewer and fewer young Inuit making this choice. For them, institutional education is a must. Learning and maintaining traditional knowledge serves to provide important linkages to Inuit history and culture, but will not necessarily result in employment if not combined with the education one receives through the completion of high school.

Concern arises from the real and anecdotal evidence that shows Nunavut youth are not receiving either form of education. They are not learning the on-the-land skills needed to be successful in the subsistence economy (which would include learning to accept the lifestyle that goes with it), nor are they receiving the formal education necessary to succeed in the wage economy. Inuit youth need at least one of these, and would be well served by both.

6.2.2 Health

Some may argue that the health and social wellbeing of a society will systematically improve as economic output increases—the added wealth will be passed on to all or to the great majority of residents. Certainly, it has been well documented that a population's health can improve with a rise in societal income. But this improvement should not be assumed.

First, if economic growth is not shared widely, economic growth can contribute to a growing income gap. Societies with large income gaps frequently have lower health status than societies with a more even distribution of income. Second, greater recognition should be given to how improved health status can contribute to greater economic wealth (Shurcke 2005) (Figuaris and McKee 2012). For instance, public health measures, such as clean drinking water and proper sanitation, have contributed to the wealth creation by improving the health of the community.

Thus, it is crucial that a high priority be placed on improving Nunavut's human capabilities not only for the sake of improving health but also to ensure that the widest range of Nunavummiut can actively participate in the economy. This would enhance financial wellbeing that would result in a virtuous circle of growth and development.

6.2.2.1 Health Status

Table 6-9 highlights several health indicators for both Nunavut and Canada. As can be seen, the health status of

Table 6-9

Select Health Status Indicators for Nunavut and Canada – latest available figures

(Figures in parentheses are from the 2010 Nunavut Economic Outlook for comparison purposes)

Indicator	Nunavut	Canada
Life expectancy at birth, males, 2007-2009[1]	69 (67)	79 (77)
Life expectancy at birth, females, 2007-2009[1]	75 (70)	83 (82)
Life expectancy at age 65, males, 2007-2009[1]	14	19
Life expectancy at age 65, females, 2007-2009[1]	17	22
Potential avoidable mortality – Age standardized potential years of life lost (PYLL) per 100,000 (2007-2009)	9,501	3,353
Infant mortality rate (2009)	14.8 (12.1)	4.9 (5.0)
Low-birth weight, 2011	7.7	6.1
Deaths (age-standardized mortality rate per 100,000 population, 2009)		
- All cancers	363	178
- Lung cancer	137.6	43.9
- Ischaemic heart disease	34.6	74.3
- Unintentional injuries	95	24.5
One or more chronic conditions (2007-2010), Inuit	33.1%	47.6%
One or more chronic conditions (2007-2010), Non-Aboriginal	51.0%	53.3%
Diabetes, 2011-2012	4.8 (2.4)	6.6 (6.0)
Hospitalization rate per 100,000 population for ambulatory care sensitive conditions (age-standardized, 2008-2009)	1,181	320
Self-assessed health status, males (% reporting very good or excellent health), 2012	46.3 (42.3)	60.2 (60.7)
Self-assessed health status, females (% reporting very good or excellent health), 2012	43.7 (51.6)	59.6 (60.3)
Self-rated mental health, males, 2012 (% reporting very good or excellent health), 2012	61.8 (72.7)	72.7 (74.5)
Self-rated mental health, females, 2012 (% reporting very good or excellent health), 2012	58.3 (68.3)	70.7 (73.2)
Cigarette smoking, male (% of population age 12 and over reporting they are a current smoker, 2012)	58.2	23.1
Cigarette smoking, female (% of population age 12 and over reporting they are a current smoker, 2012)	50	17.5
Percentage of non-smokers regularly exposed to second-hand smoke at home, 2011-2012	15.6 (17.6)*	5.3 (6.2)
Leisure time physical activity, males (% moderately active or active), 2011-2012	54.8*	57.1
Leisure time physical activity, females (% moderately active or active), 2011-2012	43.5*	52.2
5 or more drinks on one occasion, at least once a month in the past year, 2011-2012	30.6*	18.6
Tuberculosis (rate per 100,000 population, 2008)	147.3	4.9
Chlamydia (rate per 100,000 population, 2008)	3,937	228
Influenza immunization, less than one year ago	40.4*	30

Sources: (1) Statistics Canada, Demography Division; (2) Statistics Canada, ; (3) Statistics Canada, ; (4) Statistics Canada, .

Notes: Ambulatory care sensitive conditions are those which often can be cared for in the community without hospitalization such as asthma, diabetes and mental illness; *Data for Nunavut used the 10 largest communities in Nunavut.

Nunavut's population continues to lag behind the rest of the country for most indicators. This includes a ten-year gap in life expectancy for Nunavummiut males and an eight-year gap for Nunavummiut women. Other health indicators in which Nunavummiut lag behind the Canadian rate include:

- Higher infant mortality;
- Higher rate of low-birth weight;
- Higher levels of potential avoidable mortality;
- Extremely high rates of tuberculosis and chlamydia;
- A higher rate of mortality for all cancers (age-standardized); and,
- A higher rate of unintentional injuries (age-standardized) including suicide.

In addition, self-reported health behaviours by Nunavummiut are poor when compared to the country as a whole in a number of areas including:

- Higher levels of cigarette smoking;
- Higher percentage of non-smokers regularly exposed to second-hand smoke at home;
- Higher levels of alcohol consumption; and,
- Lower levels of physical activity.

While smoking rates amongst Nunavummiut have fluctuated in the past, the rate in 2012 (54%) has remained unchanged since 2005 and remains three times the national rate (Nunavut Bureau of Statistics 2013).

Another disappointing result pertains to self-assessed health status and self-rated mental health. In both of these instances, Nunavummiut men and women self-report lower rates than the Canadian average.

Low self-assessment of health is correlated with low levels of happiness (Gross and Richards 2012).

As is well known within Nunavut, suicide rates in the territory are a serious concern. A recent research report on suicide amongst Nunavummiut provides great insight on the risk factors associated with those who died by suicide between 2003 and 2006 (Chachamovich and Tomlinson 2012). The report notes that the rate of death by suicide among Inuit has increased markedly over the last 30 years, and it is currently just over 120 per 100,000 people, 10 times the Canadian rate. According to the 2007-2008 Inuit Health Survey, 29 per cent of Nunavut respondents reported a non-fatal suicide attempt at some point in their lives (Galloway and Saudney 2012). The *Learning from Lives That Have Been Lived* research report found several differences between those who died by suicide and a control group of other Nunavummiut of similar age and from the same communities of origin—those dying by suicide were more likely to have experienced childhood abuse, suffered from depression, or were unemployed.

Analysis of Nunavut's high rate of suicide has been shared by Government of Nunavut, Nunavut Tunngavik Inc., the Embrace Life Council, and the Royal Canadian Mounted Police. Together, these stakeholders collaborated on the development of a *Nunavut Suicide Prevention Strategy* released in 2010 and a subsequent action plan (Nunavut Suicide Precention Strategy 2010) (Nunavut Suicide Prevention Strategy Action Plan 2011).

Oral health is rarely included in any discussion about overall health status and the health care system. In reality, oral health needs to be considered as an integral part of the health care system given its links to other physical health issues. Oral health is a serious issue for Nunavummiut. The Inuit Oral Health Survey conducted by the Office of the Chief Dental Officer of Canada in 2008-2009 found some serious dental health issues amongst Nunavummiut. Among the finding, the rate of dental decay for Inuit are two to three times higher than the average Canadian while 85 per cent of three to five years olds have or have had a cavity. In response, ITK issued an oral health action plan in spring 2013 (Inuit Tapiriit Kanatami 2013). The action plan involves five broad goals:

- Bring overall oral health of Inuit to parity with the Canadian norm through reducing the incidence of oral disease;
- Inuit children reach the World Health Organization's goal of 50 per cent of children enter school without a cavity;
- Appropriate oral disease prevention, health promotion and treatment are available, reducing practices such as extractions as the preferred treatment alternative for diseased teeth;
- Awareness of oral health and its link to better overall health; and,
- Families that have support to help them achieve better oral health outcomes.

Eight broad, comprehensive actions were identified to help reach these goals. This action plan deserves urgent attention.

6.2.2.2 Health Care Resources and Utilization[12]

According to Statistics Canada, contact by Nunavummiut with a medical doctor in the past 12 months was 58 per cent in 2009-2010 compared to 81 per cent for the Canadian population. Nunavummiut women (66.1%) were more likely to see a physician than men (56.2%).[13]

A comparison between health care expenditures for Nunavut between 2007 and 2010 shows an increase in spending for institutional services such as hospitals and professional services (funding of clinicians not covered under payrolls of hospitals or public health agencies). The percentage of spending on drugs, the second highest health expenditure category in Canada, continues to be lower in Nunavut than the Canadian average, while the proportion of spending devoted to public health is higher (see *Table 6-10*).

Nunavut's heath services do not cover all medical issues. As a result, the government must dedicate 22 per cent of its health budget for travel and transportation. Some of these out-of-territory services could potentially be offered in Nunavut, but there have no economic studies to identify which ones.

> Out-of-territory hospitalisations averaged approximately 60% of all Nunavut hospitalisations between 2004-2008 (Office of the Territorial Epidemiologist 2011).

Health costs are elevated in Nunavut because of limited community-based health services and supports. Hospitalisation rates for conditions that are not typically regarded as requiring hospital services (referred to as ambulatory care sensitive conditions such as asthma, diabetes, and addiction related problems) are more than three times higher than the Canadian rate. The number of home care cases has increased in recent years from 1,356 in 2007-2008 to 1,507 in 2009-2010 (Tchouaffi and Sobol 2011).

Increasingly, Nunavut is facing the type of health and health care problems experienced by the provinces. This includes:

- A growing population with chronic health problems requiring more emphasis on continuing care than acute care;
- A demand for more treatment to be provided closer to home; and

Table 6-10

Total Health Expenditures by use of funds, Percentage Distribution, 2012 (forecast)

	Nunavut	Canada
Hospitals	33.6	29.2
Drugs	5	15.9
Physicians	11.5	14.4
Other professionals	4.3	10.7
Other Institutions	9.1	10.8
Public health	10.4	5.3
Capital	9.1	4.6
Administration	6.2	3.1
Other	10.8	5.8

Source: Canadian Institute for Health Information

- More elder care that includes social supports.

Provinces are struggling to shift their health care systems to be more responsive to the demand for continuing care. Nunavut will have to consider how it can address these growing health needs in light of so many other health priorities.

Is the future bleak? Nunavut does perform well compared to the Canadian rate in a number of areas including having a lower death rate due to ischaemic heart disease and attaining a significantly higher immunisation rate for influenza (40% vs. 30.4%). Moreover, because so many of Nunavut's poor health outcomes are *preventable* through improvements in healthy behaviours and by focussing greater attention on improving the broad determinants of health such as housing, nutrition, and the prevention of unintentional injuries, there is some room for optimism.

6.2.3 Social Wellbeing

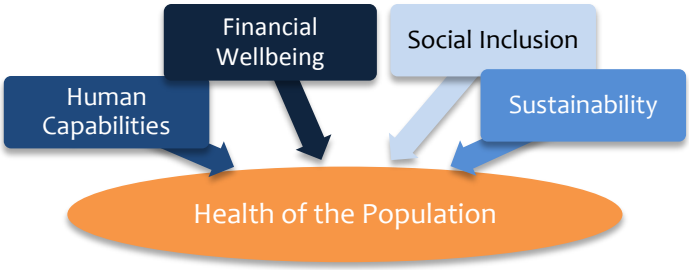
In Chapter 6.1 Financial Wellbeing an argument was presented that said the financial status of Nunavummiut is really an outcome resulting from changes within Human Capabilities, Social Inclusion, and Sustainability combined with the current economic environment. With the discussion turning to health, there is an equally plausible argument that says the health of a population is the outcome resulting from changes within Financial and Social Wellbeing, Social Inclusion, and Sustainability combined with the quality of health care services and society's efforts in personal and public health.

So, which one is correct? What determines what? The truth is both are correct. The world that shapes a society's economic success and failure is the same one that influences

[12] For additional information on Nunavut's health indicators see Health Council of Canada, *Jurisdictional profiles on health care renewal: An appendix to Progress Report 2013 – Nunavut*. http://healthcouncilcanada.ca/n3w11n3/progress2013/Nunavut2013_EN.pdf

[13] Data for Nunavut used the 10 largest communities in Nunavut.

the health of its population. The Nunavut Economic Outlook is a report focussed on the development of Nunavut and on measuring progress toward a high and sustainable quality of life. But one needn't have a great imagination to see how the Outlook could be a report on the *social determinants of health*. It has been said that the primary factors that shape the health of Canadians are not medical treatments or life-style choices but rather the living conditions they experience; that is, the social determinants of health (Mikkonen and Raphael 2010).



The Public Health Agency of Canada lists the determinants of health as more than just social ones (Public Health Agency of Canada 2013). It includes in its definition:

- Income and Social Status
- Social Support Networks
- Education and Literacy
- Employment/Working Conditions
- Social Environments
- Physical Environments
- Personal Health Practices and Coping Skills
- Healthy Child Development
- Biology and Genetic Endowment
- Health Services
- Gender
- Culture

There is now far greater appreciation for the interconnection between determinants of health and development. What's more, it shouldn't come as a surprise to learn that these are also the determinants used in the study of poverty, sustainability, and are now slowly being recognised as the key determinants in economic growth.

> The determinants used in the study of health, poverty, and sustainability are slowly being recognised as the key determinants in economic growth.

6.2.3.1 Social Determinants of Health

It has been estimated that 50 per cent of health outcomes can be attributed to the social determinants of health (Keon and Pepin 2008). In Nunavut's case, attention to improving its social determinants of health would yield significant gains in health status for years to come.

Table 6-11 highlights select indicators related to the social determinants of health for Nunavut and Canada. Perhaps the most alarming results are the high percentage of lone parent families in Nunavut (28.2%), and the significantly higher levels of household food insecurity and children in food insecure households. Crime rates for both violent and property crimes are comparable to those in the NWT but remain significantly higher than that for Canada as a whole.

The social determinants of health also identify social sup-

Table 6-11

Select Social Development Indicators for Nunavut and Canada

Indicator	Nunavut	Canada
Percentage of population age 65+ (2011)[1]	3.2	14.4
Sense of community belonging (% indicating very strong or somewhat strong belonging, 2012)[2]	85.2	66.1
Percentage of lone parent families[2]	28.2	16.3
Average number of persons in household[2]	3.7	2.5
Household food insecurity[3]	36.4	12.3
Children in food insecure households[3]	56.5	17
Property crimes per 100,000 population (2010)[4]	16,842	3,846
Violent crimes per 100,000 population (2010)[4]	10,286	1,282

Sources: (1) Statistics Canada, Demography Division; (2) Statistics Canada, 2011 Census of Population; (3) Statistics Canada, Canadian Community Health Survey (2011); (4) Statistics Canada, Canadian centre for Justice Statistics

ports as a key factor affecting one's health—just as important as other factors such as smoking and high blood pressure (Public Health Agency of Canada 2013). According to the 2007-2008 Inuit Health Survey, many residents of Nunavut lack strong social support networks. For instance, only 46% of respondents reported that they have someone to turn to most or all of the time when they need emotional support (Galloway and Saudney 2012).

There continues to be an increase in the available documentation reporting the health and social status of Nunavummiut. This is an important and positive development as it can serve to focus attention and identify priorities. Moreover, a number of strategies have been developed by Nunavut officials in recent years to address the health and social problems including:

- Maternal and Newborn Health Care Strategy 2009 – 2014
- Nunavut Suicide Prevention Strategy
- Nutrition in Nunavut: A Framework for Action
- Public Health Strategy: Developing Healthy Communities 2008 – 2013
- Tobacco Reduction Framework for Action

The challenge for Nunavut is to put these strategies into concrete action through the allocation of both financial and human resources. Focused attention on the social determinants of health needs to be a high priority for Nunavut. Of particular concern is whether social inequities in Nunavut are increasing (e.g., increased gaps in nutrition, income, education and housing). If so, research suggests that Nunavut's overall health status will stagnate or worsen thereby limiting any economic or social progress for its citizens (Dunn 2002).

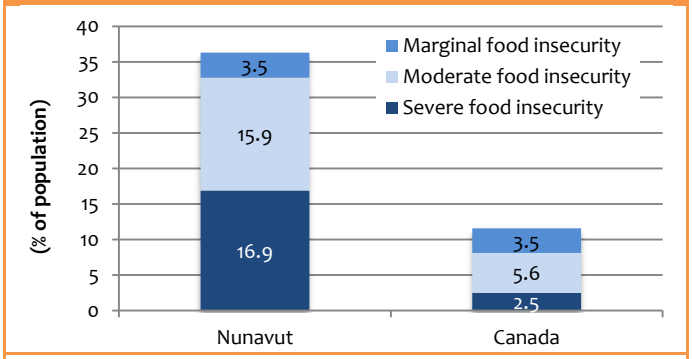
6.2.3.2 Food Insecurity

Access to proper food supply is a basic human need and an important determinant of health, development, and overall quality of life. A major study on food security in 2011 identified Nunavut as having the highest percentage of households with food insecurity in the country—36.4 per cent versus 12.3 per cent for Canada as a whole (see *Figure 6-17*) (Tarasuk, Mitchell and Dachner 2011). Food security has been measured as follows:

- Those who are marginally food insecure have reported some concern or problem of food access over the past 12 months;
- Households classified as moderately food insecure have reported compromises in the quality and/or quantity of food consumed among adults and/or children; while

Figure 6-17

Rates of Food Insecurity, Nunavut and Canada



Source: Research to identify policy options to reduce food insecurity (PROOF).

- Those classed as severely food insecure have reported more extensive compromises, including reduced food intake among adults and/or children because of a lack of money for food.

Perhaps more alarming is the estimated food insecurity amongst children—57 per cent in Nunavut compared to 17 per cent for Canada as a whole. The authors of the 2011 report note that food insecurity is a serious social and public health problem in Canada, but it is even more serious for Nunavut. The effects of food insecurity will be felt for many years on the territory's social programs and overall health status.

Much of the findings from research on food insecurity were crystalised by the food protests outside grocery stories that began in Nunavut under the banner *Feeding My Family*.[14] This movement was emboldened by the end-of-mission statement from Olivier de Schutter, United Nations' Special Rapporteur on the right to food, who said a large number of Canadians are unacceptably too poor to feed themselves decently and that Inuit are in a particularly desperate situation (De Schutter 2012).

Two factors influence food insecurity (Impact Economics 2012):

1. Incomes that are too low to afford groceries on a daily basis; or
2. Insufficient access to country food either through one's own effort or through sharing.

The impediments that are keeping Nunavummiut out of the workforce or have them stuck in a welfare trap are the same impediments to earning sufficient incomes to feed their families. The diminishing participation or access to subsistence

[14] See Facebook Page "Feeding My Family". http://www.feedingmyfamily.org

harvesting has implications for food security, but also affects the social fabric of a community, altering long-standing cultural norms. These impediments touch on all aspects of Nunavut's development, including financial wellbeing, human capabilities, inclusion, and sustainability, and are themselves determinants of food insecurity.

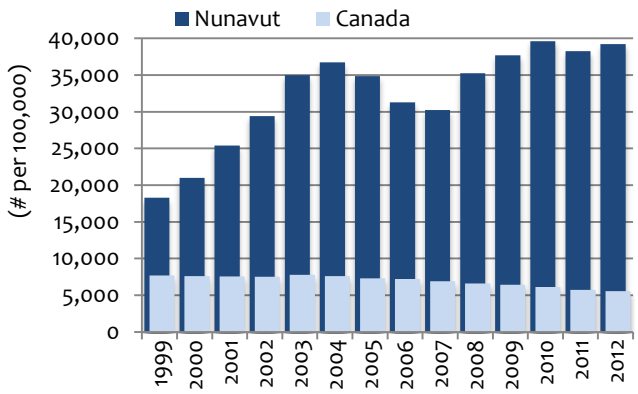
Acting on a pledge made in *The Makimaniq Plan: A Shared Approach to Poverty Reduction* (November, 2011), government departments, Inuit organisations, and community groups formed the Nunavut Food Security Coalition. The coalition held a symposium in Iqaluit, January 22 to 24, 2013, to focus on programs, policies, and initiatives that are most likely to impact on the food security of Nunavummiut. Recognition and public discussion on the issue of food insecurity is only a first, albeit an important, step toward addressing this fundamental problem.

6.2.3.3 Crime

Nunavut suffers from extraordinary levels of crime. Crime rates are consistently the highest in Canada, and the trend is decidedly upwards—meaning conditions appear to be getting worse (Statistics Canada 2012) (see *Figure 6-18*).[15] In 1999, there were 4,906 criminal violations across Nunavut.[16] Given its population at that time, the rate of criminal activity was 18,291 per 100,000 persons.[17] The rate of crime across Canada at that time was 7,694 per 100,000. By 2012, the

Figure 6-18

Criminal Code Violations per 100,000 persons (excluding traffic), Nunavut and Canada, 1999 to 2012,



Source: Statistics Canada, Canadian Centre for Justice Statistics, Uniform Crime Reporting Survey and Demography Division. prepared by Nunavut Bureau of Statistic.

In Canada, all citizens have the right to feel safe. Nunavut will never achieve its development goals including its ultimate goal of a high and sustainable quality of life, if women and children are afraid in their own homes and own communities.

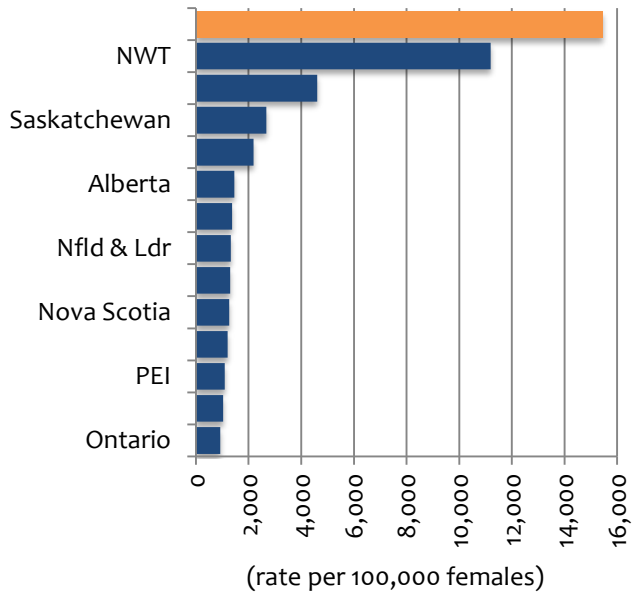
number of reported criminal violations in Nunavut had grown to 13,219, for a crime rate of 39,229 per 100,000. In most other jurisdictions, the number and rate of crime is decreasing, with the Canadian average equalling 5,588 per 100,000 people.

The RCMP has suggested that alcohol plays a part in most, if not all, incarcerations in Nunavut's correctional services (Impact Economics 2011). Other factors can be traced to poor socio-economic circumstances such as overcrowded homes, poverty, and stress, creating a vicious cycle of addictions and abuse.

Nowhere is this vicious cycle more evident than in the rates of family violence and the abuse of women. No crime can be considered acceptable behaviour, but at 13 times the national rate, the abuse of women in Nunavut is particularly shocking (see *Figure 6-19*). Police reported the number of female victims of violent crime was equal to 1,715 in 2011,

Figure 6-19

Police-Reported Female Victims of Violent Crime, 2011, Provinces and Territories, 2011



Source: Statistics Canada. Canadian Centre for Justice Statistics, Uniform Crime Reporting Survey and Demography Division.

[15] Occasionally, crime rates in the NWT exceed those in Nunavut.
[16] All crime data reported in this section excludes traffic violations.
[17] Crime data are normalized for the purpose of comparison. The number of crimes is divided by the total population and then multiplied by 100,000, producing a rate per 100,000 persons.

which translates into a rate of 15,453 per 100,000 (Nunavut Bureau of Statistics 2013). That amounts to 1.5 incidents for every 10 women. If Nunavut ever wants to achieve its development goals including its ultimate goal of a high and sustainable quality of life, its men, women and children must feel safe in their own homes and in their communities.

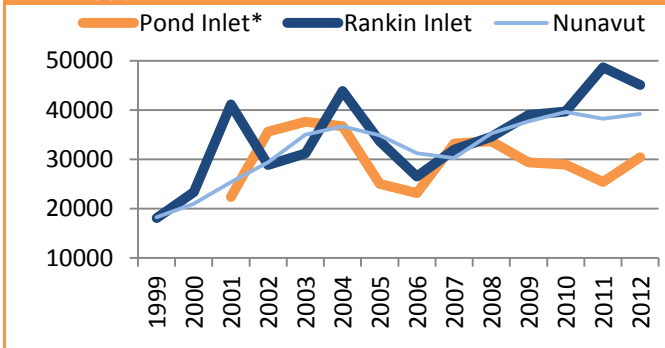
There is considerable variation in crime rates across Nunavut. The highest number and rate of crime takes place in Iqaluit. In 2012, there were 5,137 criminal violations, equal to a crime rate of 75,400 or almost twice the territorial average. For brief periods over the past 15 years, crime rates in Cambridge Bay and Kugluktuk were higher, but by in large and since 2008, Iqaluit has been Nunavut's crime capital since it became the territory's capital.

Criminal activity in other communities will be important to watch in the coming years. Of particular interest will be Pond Inlet and Rankin Inlet—the two communities most likely to be affected by resource development in the coming years (see *Figure 6-20*). Crime in both communities is unbelievably high in comparison to the average across Canada, however in Nunavut, Pond Inlet would be considered a low crime community, while Rankin Inlet is slightly above average.

There are legitimate reasons to follow crime in these two communities. Elsewhere, communities faced with rapid change as a result of economic growth have seen crime rates soar (*Figure 6-21*). Kugluktuk endured this phenomenon ten years ago, when it was first exposed to economic growth as a result of its ties with the diamond mines in the Northwest Territories. Crime rates are just now returning to the Nunavut average, though are much higher than they were prior to that exposure. Baker Lake appears to be going through the same thing now. In 2010, a year that coincides with Meadowbank Gold Mine going into production, crime rates jumped up markedly from a level that was previously amongst the lowest in Nunavut.

Figure 6-20

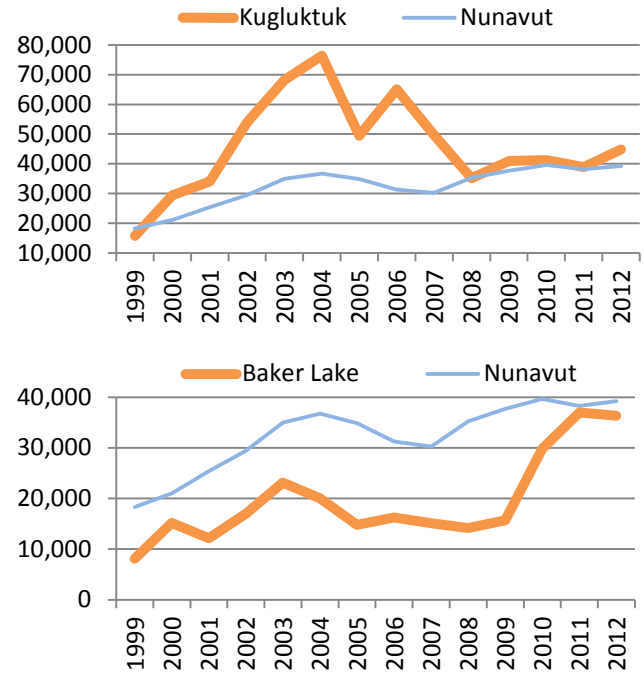
Crime Rate per 100,000 persons, Pond Inlet and Rankin Inlet, 1999 to 2012



Source: Statistics Canada, Canadian Centre for Justice Statistics, Uniform Crime Reporting Survey and Demography Division.
Note: * data for Pond Inlet prior to 2001 is unreliable and therefore not included.

Figure 6-21

Crime Rate per 100,000 persons, Kugluktuk and Baker Lake, 1999 to 2012



Source: Statistics Canada, Canadian Centre for Justice Statistics, Uniform Crime Reporting Survey and Demography Division.

There is ample research throughout the developing world on the effects of economic growth on crime in developing communities. Understanding what has happened elsewhere and learning what can be done in advance are two important tasks for these communities.

Previous editions of the Outlook have included commentary of how economic growth can affect a community. Rising crime in the face of rapid economic change can severely test the social fabric of a community. Social networks that would otherwise help legitimise the changes brought about through economic growth by providing support to those who are not benefiting, can't understand, or are unable to cope tend to atrophy at the time when they are needed most. This will be discussed further in the next section. For now, it is important to understand that a rise in crime often coincides with rapid economic change and that it is better to prepare for it rather than simply hope that the next community will be somehow immune.

6.2.3.4 Homelessness

Shelter is most certainly a determinant of health and a factor in most other aspects of economic and social life. Nunavut faces several challenges in reducing the number of homeless people. And it must be said that the challenges are complex, as they are everywhere.

Homelessness is a serious issue in Nunavut, though the number of people suffering from absolute homelessness—sometimes referred to as visible homelessness—is lower than in southern Canadian cities. The harsh arctic climate greatly reduces the number of people living on the street, but there are more people living outdoors in unheated or poorly heated makeshift huts than some might expect. A night never passes without a body in all 43 beds in Iqaluit's two shelters (Nunavut Housing Corporation 2013).

Most individuals who would otherwise suffer an absolute form of homelessness take refuge with family or friends. These people are part of Nunavut's hidden homeless, sometimes referred to as Nunavut's *couch surfers.*

A survey conducted in 2009 found four per cent (1,220) of Nunavummiut fit into this group of hidden homeless and that one-third of this group—about 400 people—had been homeless for at least a year. Similarly, 32 per cent of households in Nunavut (2,730) had housed temporary residents in the past twelve months (Statistics Canada 2010).

Overcrowding is at the root of many social and health issues. It is common to hear reports of houses sheltering 18 or 19 people, of the need for people to sleep in shifts because of a lack of beds and floor space, and that at this level of overcrowding, the safety and security of women and children are severely compromised. The government's *Ilagiitsiarniq A Strategic Framework for Addressing Family Violence Prevention in Nunavut* calls overcrowding a contributing factor to heightened levels of family violence (Government of Nunavut 2012). Further, studies show that an individual's housing condition impacts their education, employability, and sexual health. It can be argued that overcrowding and hidden homeless in the territory is connected to an increased incidence of pregnancy, low literacy and graduation rates, high unemployment, poor health, acute addictions, crime, and violence (Nunavut Housing Corporation 2013).

There are also many Nunavummiut who are *at risk* of homelessness. Financial insecurity and job uncertainty coupled with the high cost of living and lack of housing options means homelessness is a constant threat for some. A missed paycheque, a breakdown in a relationship, or unexpected expense can cause this otherwise stable household to be in need of emergency shelter (Qulliit Nunavut Status of Women Council 2009).

6.2.4 Housing

Housing influences many aspects of Nunavut's development. For example, home ownership provides families with financial security. Purchasing a home offers an opportunity to store wealth that can be used at a later date. A home's equity can be leveraged in order to move into a more expensive property, it forms an important component in one's retirement plans, it can become a part of a family's inheritance, transferring wealth from one generation to the next, and once mortgage free, homeownership can be an opportunity to work less or spend more. In other words, it increases the freedom of choice, which is an important part of society's development goals.

Because of these attributes, government's have long promoted home ownership amongst Canadians through such things as mortgage insurance, easing lending restrictions, and tax breaks. These arguments make it appropriate to discuss housing in Section 6.1 on Financial Wellbeing.

Alternatively, it's also true that one's housing status—that is, where one is situated along the housing continuum—is very much a part of one's social status within a community. Being homeless, living in public housing, living in staff housing, or a homeowner, one's shelter distinguishes people from one another in the community. Taken one step further, the quality of one's home can further stratify families into different subclasses within society.

Housing can influence one's social circle, which can be the difference between being included in community decisions and having no voice at all. In this context, housing is a matter of social inclusion.

Housing influences one's ability to successfully engage in all of life's activities. To a degree, this encompasses financial and social elements, since the financial reward and social inclusion one obtains from homeownership contributes to successful participation in a community. But the quality of a family's home can also influence an adult's ability to perform well at work or for a child to perform well in school. A home that is crowded, has poor ventilation, is cold, or is damp can cause illness, deprives people of a good night's sleep, can be stressful, and poses serious safety and security threats, especially to women and children. In this scenario, housing becomes a contributor to the decay of social wellbeing and human capabilities. Furthermore, housing plays a role in poverty in Nunavut where the public housing program con-

tributes to a kind of welfare trap that is unique to Nunavut.[18] This demonstrates that housing is an important consideration in development because it facilitates so many of the outputs needed to achieve a high and sustainable quality of life.

Clearly, housing touches all aspects of a community's development. It is presented here within Human Capabilities because it is clearly linked to the discussion on education, health, social wellbeing, and homelessness. But it is helpful to think of housing in terms of financial wellbeing and social inclusion as well since its influence on those components of development is also important.

6.2.4.1 Overview of the State of Housing in Nunavut[19]

The Government of Nunavut released the *GN Comprehensive Housing and Homeless Strategic Framework* in 2013 (Nunavut Housing Corporation 2013). It correctly identifies the current state of housing in Nunavut a crisis. Here's why.

Approximately 57 per cent of Nunavut's population live in 5,067 public houses across the territory (Nunavut Housing Corporation 2012)(see *Figure 6-22*).[20] The majority of these tenants (58 per cent) are unable to pay anything more than the minimum for rent, currently set at $60 per month—a fee that doesn't even cover the administration costs of those units. Under the new rent scale rules, the number of tenants paying the minimum rent will climb to approximately 75 per cent. Only 4 per cent of tenants pay more than $1,000 per month. Twice this amount is needed to meet the cost of a typical public housing unit.

The Nunavut Housing Corporation covers the majority of expenses associated with operating its public houses, the average of which is $23,000 per year (see *Figure 6-23*). This includes the cost of heat, water, sewage, power, and maintenance. The Department of Family Services' Social Assistance Program pays for a few of the remaining costs in situations where the tenant cannot do so themselves. Either way, it is a cost borne by the Government of Nunavut.

These annual costs are higher than what a private homeowner pays, in part due to the cost of administration, but also because of exorbitant costs for utilities. The highest of all costs is not heating fuel like most would expect, but water and sewage. Water and sewage are trucked to and from most homes, which is an inefficient and expensive service that is provided by the Hamlet. New, more efficient medium density public housing (5-, 10-, and 24-plex buildings) and greater use of utilidor systems should lower these costs.

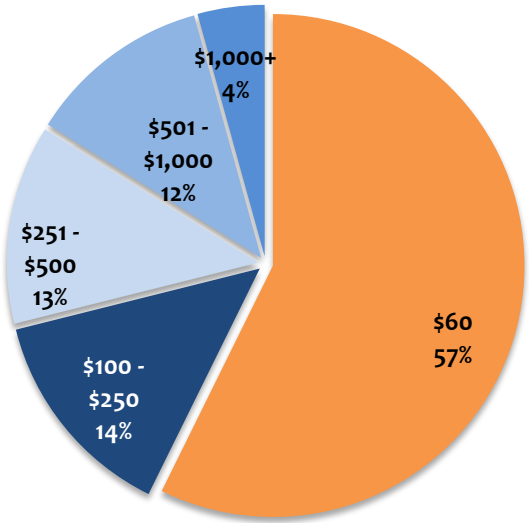
In total, the Nunavut Housing Corporation will spend $200 million in fiscal-year 2013-14 on the operations of its public and staff housing. The Government of Nunavut contributes $165.8 million while the CMHC contributes a majority of the remaining $34.5 million through the Social Housing Agreement (Nunavut Housing Corporation 2012). This Agreement is set to expire in 2037, decreasing its contribution by approximately $1.5 million each year. This decrease must be offset by an increase in GN funding.

The Housing Corporation also receives funding for capital projects. In 2013-14, the Government of Nunavut has budgeted $29 million for that purpose, which does not include the $100 million transfer announced by the federal government in its latest budget (Government of Canada 2013). This latest round of federal funding—$30 million in year one, and $70 million in year two—will cover the cost of construction of 210 units over the next two years.

Not including the CMHC's contribution to the Housing Corporation or the federal transfer, the $195 million spent by the government on housing represents 13 per cent of the its annual budget.

Figure 6-22

Monthly Rent Paid by Public Housing Tenants, 2011, per cent of tenants



Source: Nunavut Housing Corporation.

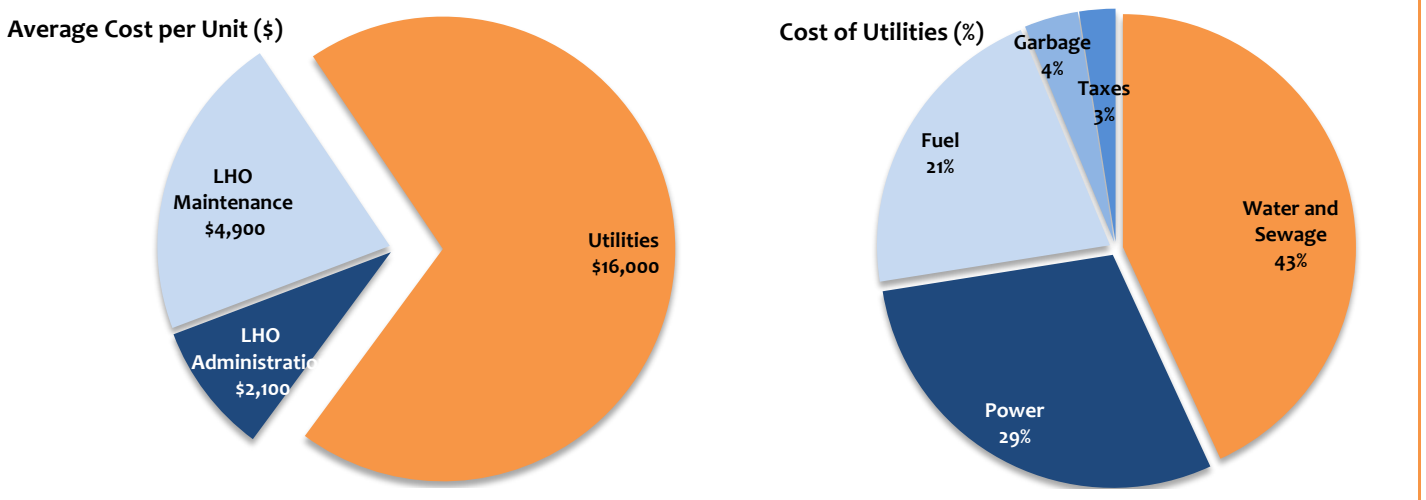
[18] Nunavut's public housing program is modeled after that used in the Northwest Territories, where a similar trap exists.

[19] Figures are constantly changing as new public housing units are completed and with the changes in public housing tenants. This section relies on data presented in the GN Long-term Comprehensive Housing and Homelessness Strategic Framework unless stated otherwise.

[20] As of March 31, 2012.

Figure 6-23

Average Cost of Operating and Maintaining Public Housing, dollars per unit and percentage breakdown for utilities



Source: Nunavut Housing Corporation

6.2.4.2 Understanding the Depth of the Crisis

The level of dependency on social housing and the cost of operating these houses are reasons why Nunavut's public housing is described as being in crisis. But there is more.

Already, no other jurisdiction in Canada spends as much as Nunavut does on public housing (in relative terms). Some argue that this last point is one to be celebrated. Nunavut's system of social welfare is the most generous in all of Canada—a statement made stronger if one considers the contributions of income support, and the array of food, fuel, and power subsidies that are made available to all Nunavummiut (even to those with high incomes).

The challenge is that Nunavut does not operate within an egalitarian welfare state. Nunavut's public housing program is not rights-based in the fashion of the Nordic model, where equality is the desired end goal and is supported by an extensive taxation regime. Nunavut doesn't have the tax base to support equality to this extent, and its main benefactor, the Government of Canada, does not provide the funding to do so.

> At its core, this is the same challenge as the one facing families who struggle to feed their family because of the high cost of food. It is an issue of inadequate income and no practical means to do anything about it. There is a lot that can be done to lower the construction and operating cost of housing, but the market, climate, and geography will always be such that homeownership will be expensive and someone without a job or working for the minimum wage will forever remain unable to afford a home.

Instead, what Nunavut has is a society where there is a lot of need. Too many Nunavummiut simply cannot afford the cost of shelter. What truly puts Nunavut's public housing program into a crisis state is that the number of residents in need is growing, putting pressure on the government to increase the stock of social housing despite the fact that it doesn't have the money to do so.

In addition to the current stock of 5,000+ public housing units, there were 1,465 individuals and families on the waiting list for new units. All of these people need housing but cannot afford it. Within the needs-based program, these families are entitled to apply for and (theoretically) receive housing from the government. At a build rate of 70 to 75 units per year, it would take about 20 years to clear this waiting list and about $500 million to cover the cost of construction (see *Table 6-12*).

In the meantime, the population is growing and with it, the need for more public units. Assuming 58 per cent of the population continue to need public housing in the future, an additional 1,914 homes will be required over the next 20 years, based on the average population growth described in Chapter 4. To meet this need, 102 new public housing units will have to be built each year. These are in addition to the units needed for those already on the waiting list. Combining the two, 175 new units are required each and every year for the next 20 years in order to provide housing to all existing and future families in need.

Table 6-12

Rising Need for Public Housing	
Population Growth (2013 to 2032)	12,358
New population in Public Housing (assume 58%)	7,168
Units needed for new population (assume 3.5 occupancy rate)	2,048
Construction rate to meet needs of new population by 2032 (units per year)	102
Units needed to clear current waiting list	1,465
Construction rate to clear existing waiting list in 20 years time (units per year)	73
Total Units Needed by 2032	3,513
Construction Rate to Meet Needs by 2032 (units per year)	175

Source: Nunavut Housing Corporation, Impact Economics

This will not happen. Nunavut cannot afford to build 175 units every year. Nor is the federal government likely to provide that kind of money on an on-going basis. Besides, the government cannot afford the escalation in operating costs that will accompany the construction of new public housing units.

But that's not the end. Even in a world where Nunavut does have the money for construction and operations for the next 20 years, without a fundamental change to how the territory deals with this constant need, in the year that follows 2032 and after building 3,512 new public houses, new families will emerge needing housing. The current approach is simply unsustainable.

To fix the housing crisis requires that Nunavut stem the escalation of need. This is easier said than done, of course, and is not something that the Nunavut Housing Corporation can accomplish on its own. In fact, the ultimate solution has very little to do with the Housing Corporation since the problem is only indirectly related to housing. Furthermore, an argument can be made that the solution even goes well beyond the Government of Nunavut. A broad, system-wide solution is required.

Reconfirming why the state of housing in Nunavut is in crisis is the investigation into why this need exists in the first place and what must transpire to eliminate it.

In the meantime, and until the solution is found, and even in a scenario where a solution is found, there is still the practical issue to deal with—today and for at least the foreseeable future, Nunavummiut need more social housing. Without it, a further degradation of wellbeing should be expected along with an almost certain continuation of the negative consequences that arise in its absence.

6.2.4.3 The Solution for Now

For underprivileged Nunavummiut to achieve some level of equality of opportunity, never mind equality of outcome, everyone must have safe, appropriate, and affordable shelter. The Government's strategy correctly identifies the key actions required; namely:

- Build more homes in a way that is affordable for government;
- Reduce dependency by improving financial wellbeing and increasing market-based housing alternatives;
- Eliminate gaps in the housing continuum; and
- Improve coordination across government and throughout the housing system.

Nunavut has never had a housing market like what one finds elsewhere in Canada. But this model is what most people are familiar with and so, to some degree, a housing market is what Nunavut is trying to achieve. This end goal might not be possible—certainly not over the next 20 years—except in Iqaluit and potentially in Rankin Inlet and Cambridge Bay.

Are there other models that might suit Nunavut better? Nunavut might want to investigate other paths and start a conversation with Nunavummiut about these options, what might work better, and what they would cost.

Collaboration

The last action listed is the only one that doesn't require large sums of money so theoretically, it should be the easiest to accomplish. In practical terms, however, sorting through and aligning all affected and engaged stakeholders is a challenging undertaking because of the complexities involved and the general lack of consensus on the realities of Nunavut's housing situation and reasonable options to do something about it.

The correct system will be one where the coordination goes beyond the Housing Corporation, Community Government and Services, and residential contractors. It will involve Family Services, Justice, Education, Health, Finance, Economic

Development, the Hamlets, broader industry partners, and Nunavummiut, themselves.

On the surface, it might seem that establishing collaboration as a centre-point within the Housing Strategy is both unimaginative and innocuous, but within it lies the ultimate challenge for Nunavut; how to move away from the current unsustainable path and toward a integrated (complex) and innovative system without adding to the current crisis by creating destitution where there wasn't any before.

The Housing Strategy questions how the territory can transform its existing housing environment that is characterised as inadequate, expensive, and incomplete into something that is appropriate, affordable, and sustainable.

Building More Houses

The other actions listed in the strategy require money, which puts them in some jeopardy. The Government of Nunavut can barely afford to build 25 houses each year, let alone the 175 needed. Therefore, it must go to the federal government on a yearly basis to plead its case. Over the past ten years, this strategy has had great success, landing $400 million in federal transfers for the sole purpose of building social housing—it is far more than any other jurisdiction in Canada has received (on a relative basis). As a result, the territory's stock of social housing will have risen by more than 1,200 units by the time all the money is spent.

This has been a great success from the standpoint of social housing, but it is inevitable that the well will run dry eventually —as it did in 2012 after the $100 million from the Canada Economic Action Plan was fully accounted for and before the next $100 million was announced in 2013. The gap was so short that it was hardly noticed, but there will come a time when the gap widens to several years. When that happens, assuming the escalating need has not been addressed, the waiting list will once again start to grow, overcrowding will again intensify, social outcomes will deteriorate, and housing will again become a part of the problem.

A part of the solution has been to move increasingly to higher density housing. Gone are the days when the government builds detached single-family dwellings by the hundreds. The new models are more compact and energy efficient, and most importantly, they will be less expensive to build. Not everyone will like this. But for anyone in desperate need of housing—the decision has been made that a small efficient house is better than no house at all.

Housing Continuum

The Government of Nunavut endorses the concept of a Housing Continuum in its housing strategy, which is an approach for moving people through different levels of housing (see *Figure* 6-24), from being homeless to living in shelters, from shelters into transitional housing, from supportive housing into non-market rentals (social housing), and ultimately into the private market. The theory is that without a complete continuum, individuals or families are unable to move up because of the impossibility of jumping two or three steps along the continuum. For example, in Nunavut it is difficult for many in public housing to move to the private market because of a lack of affordable rental options and low-cost private homes. A complete housing continuum makes the transition from one form of housing to another possible by offering people and families choices, which lowers vulnerability to homelessness and provides greater housing security.

From a public finance perspective, each form of shelter should be assessed in terms of its daily cost (see *Figure* 6-25). There is a financial incentive for the government to make available housing options at each step along the continuum and to promote the upward mobility of people through each of the publicly funded housing options. It should also be interested in promoting the development of different

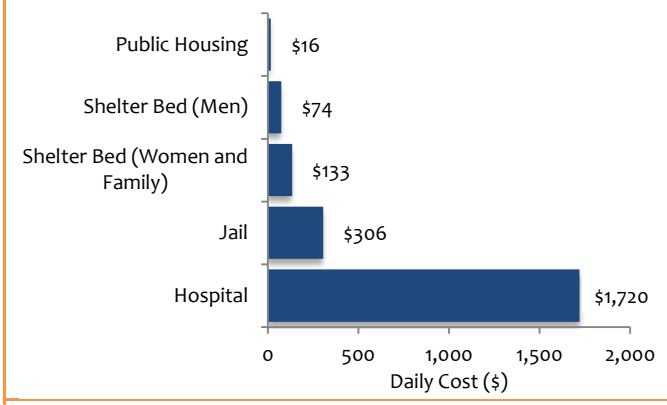
***Figure* 6-24**

A Complete Housing Continuum

Source: Adapted from the Nunavut Housing Corporation.

Figure 6-25

Daily Housing Cost, $ per person



Source: Nunavut Housing Corporation, GN Long-Term Comprehensive Housing and Homelessness Strategy.

options within the private sector because, as the previous example described, shortages there can effectively impede one's movement out of public housing.

There are challenges at both ends of the continuum. At the lower ends, the cost of shelter is not limited to bricks and mortar. Emergency, transitional, and supportive housing must offer the social services that correspond with the needs of its tenants. It is not enough to have the Housing Corporation dedicate one of its newly constructed units to fill gaps in the continuum unless the government has committed the resources to equip it with the right suite of emergency, transitional, and support services, and unless the community itself endorses the project and supports it with its own resources.

In the absence of support services and the homes in which to deliver them, most people in need of shelter at the lower end of the continuum crowd into public housing units. This is the cheapest form of non-market housing from the perspective of the government, but creates serious health and safety issues and ultimately costs the government more in the long run through the deterioration of social wellbeing.

Another interruption in the housing continuum is created by the widespread use of staff housing in Nunavut. Employers throughout the territory offer their staff subsidised housing as a incentive for employment. From the perspective of the Government of Nunavut, it is a necessary tool to attract and retain employees. But it comes with a steep price. Its staff housing program is meant to be transitional. But the deal is so good—equal to $18,500 per household that is treated as a non-taxable benefit—that many choose to make their staff housing a permanent solution (Government of Nunavut 2012). As a result, the number of staff housing units has grown to more than 1,400 effectively removing these residents with government jobs and government salaries from the market. This interference is particularly harmful in Iqaluit where approximately 40 per cent of the government staff housing is located and where a legitimate and diverse private market should exist.

Housing Alternatives

At the upper end, there are several challenges in developing a diverse private housing market in Nunavut. Outside Iqaluit, Rankin Inlet, and Cambridge Bay, Nunavut's communities lack a fully functioning market with too few buyers and sellers. A house that would cost more than $500,000 to build might have a "market" value (resale price) of $350,000 because there is no competition amongst buyers.

There is no fee simple land available in Nunavut for residential land development. Only the RCMP, Hudson's Bay Company, and churches hold fee simple land.

This form of absolute land ownership allows for a full range of financing options in which land provides collateral. In Nunavut, homeowners lease Crown land through the municipal government.

The CMHC treats leased land differently than fee simple land. For it to underwrite a mortgage on leased land, several requirements must be met. In Iqaluit, the city has negotiated an agreement called a "Consent to Mortgage" with the CMHC that meet these lending requirements. Other local arrangements enable CMHC to insure mortgages across the territory. These approaches to mortgage insurance help to offset the effects of tenure arrangements, but the absence of fee simple land can create hesitation in prospective homebuyers, especially those arriving from other parts of the country (Government of Nunavut 2012).

For communities directly affected by resource development, the prospects for private homeownership are better, but obstacles still exist. For someone gaining employment at an entry-level position with a mining company, purchasing a home is not likely his or her first thought. The most immediate response to a new influx of money is typically to alleviate pent up consumer demand; that is, they buy things that were previously unaffordable. At best, the higher income could result in an increase in rent paid for a public housing unit. This is a small gain for the housing corporation, but one that must be accepted, at least initially. It will be many years

before families create enough savings to look at home ownership as a viable option.

Residential developers share the same risk. A mine with a projected life of 10- or 15-years where the local employees are filling the lower paying positions does not justify investing in a multi-million dollar residential development with a 20-year payback period. It is more common for developers to look for government support before building; in other words, the private sector sees greater value in building public or staff housing units than building units for the private homeowner.

Like other aspects of development, ending the crisis in housing will be as much about wholesale changes to how Nunavut fosters greater financial wellbeing, human capabilities, and social inclusion alongside its economic opportunities as it is about filling gaps in the housing continuum. And, like other areas of Nunavut's development, the investigation into possible solutions must start with the system that has led Nunavut to its current state. Surely there are other models and innovations that Nunavut can experiment with. The new Framework for Development acknowledges the complexity of economic development, which requires innovation and adaptation.

Housing First

It is worth considering other approaches to addressing housing and homelessness. Housing First is one such approach. Its proponents believe that an individual who is homeless or faces social, medical, mental health or physical challenges in securing a permanent home will respond to treatment better if their housing needs are dealt with first. For these individuals, safety and security is the number one issue that must be addressed. Housing First establishes this safe and secure environment, lowering the health and social costs over the long term.

Housing First it is not necessarily a cheaper route to take, at least not initially. Its claim is that dividends are paid out in the long run by reducing the number of people in need of the highest cost forms of shelter and that this approach improves the chances that upward movement in housing is permanent.

Housing First is still a needs based program and is equally unaffordable as Nunavut's current approach simply because the need is so great. However, it does offer an alternative. Even if this is not the right choice for Nunavut, a positive outcome from such an investigation would be the recognition from within Nunavut that change is needed.

6.3 SOCIAL INCLUSION

Social inclusion is a complex concept with many different elements. It can be described as the strength of connection between people, community, government, and institutions. Some would call this the social fabric of a community and would draw a direct link between it and the concepts of social cohesion and trust.

Inclusion (cohesion and trust) is an essential element in creating a complex system of development that is adaptive and innovative and is allowed to evolve over time.

Social inclusion is relevant at all levels of society. For example, success for small non-government organisations depends on a close association with government and increasingly with industry. Social inclusion between the Government of Nunavut, Nunavut Tunngavik Incorporated, industry associations, and other non-profit interest groups is needed to create, implement, and test processes that are designed to advance the development of the territory.

Some find it easier to understand social inclusion as being the opposite of social exclusion, which is the process of marginalization through barriers to participation in economic, political, civic or cultural life. The viewpoint put forward in the report *Understanding Poverty in Nunavut* was that social exclusion is a cause of and can increase the extent of poverty. Exclusion prevents an individual or family from accessing opportunities and limits their ability to affect change.

Still others see social exclusion as the result or outcome of numerous social and economic factors. Poor education, health, housing, labour force participation, social assistance, and poverty combine to give rise to social exclusion (Government of Yukon 2010). In this instance, the measure of exclusion incorporates the same variables used in this Outlook to measure quality of life.

It is interesting to learn that the connections between well-being, poverty, and social inclusion are so intertwined that different researchers use identical data to describe these three outcomes. There is no doubt that the causality goes in all directions between these three concepts.

Poverty and wellbeing were described earlier as being at opposite ends of the quality of life spectrum, with social inclusion being absent at the bottom end and prevalent at the upper end. This definition makes social inclusion a revealing measure of the state of development.

The importance of cohesion and trust is elevated in the new Framework for Development. Establishing a complex, innovative, and adaptive system requires tremendous cooperation. But it doesn't mean that a consensus forms around every decision. There will always be dissention between economic growth and environmental protection (for example). A desirable system would include mechanisms to debate openly and fairly, it would ensure full disclosure of available information, and decisions often include elements of compromise. But more importantly, in a complex system, all agents are working toward the same goals in terms of greater freedoms, quality of life, and happiness. Any and all decisions must be judged against these ultimate goals.

One of the challenges with social inclusion is in measurement. Most of the concepts such as social fabric or strength of connection between system agents are intangible. How can we know if citizens, governments, and industry are working well together? Sometimes the lost connection is between two departments of the same organisation or between two organisations that share almost identical goals.

People will naturally form their own opinions regarding how these systems are operating. The *Qanukkanniq? GN Report Card* was very clear in showing that Nunavummiut don't think their connection with government is very strong (North Sky Consulting 2009). But beyond qualitative data and personal opinion, there are only loose proxies such as crime statistics, voter turnout, volunteerism, and migration to gauge the state of a community's *social fabric* and such things as MOUs or political statements to determine the strength of connection between organisations.

More and more, researchers and analysts have taken to studying inequalities as a means to quantify social inclusion where unequal distribution of income is a signal of poor social inclusion. Inequality is also used as a direct measure of community wellbeing, with wider inequalities being linked to less favourable development outcomes.

This approach could work for Nunavut. If one believes that social inclusion in Nunavut has deteriorated, then the income inequality described in Chapter 6.1 is proof.

Rather than revisiting those income inequality statistics, this chapter is used to discuss how inequalities form and what policies can affect them.

6.3.1 Economic Differentiation

Nunavut will need a strong, vibrant economy if it is to achieve a high quality of life. Regardless of whether one is most concerned with job creation, poverty reduction, human development, environmental protection, or income equality, a strong and vibrant economy is a part of the solution. However, the manner in which the economy grows is just as important as the rate at which it grows.

> A strong and vibrant economy is a part of the solution regardless of whether one is most concerned with job creation, poverty reduction, human development, environmental protection, or income equality,.

The discussion in Chapter 3 touched on the nature of economic growth: there are no guarantees that economic growth will affect everyone equally, and indeed, it rarely does. Growth can actually come at a net cost to society. It can take away freedoms, remove natural resources without appropriate compensation, and widen inequalities. For these reasons, we concluded that society should not focus simply on growing the economy. How it grows and the benefit it delivers is also important.

Some income inequality that flows from economic change can have a positive influence on a society where it is reflecting differences in individuals' responses to equal incentives or opportunities, and is thus consistent with efficient resource allocation. That is, the benefits are flowing to those that truly deserve them, rather than on the basis of ethnicity, gender, family name, or political or religious views. People must be able to see that mechanisms are in place that will allow them to participate in the future and that the new economy's growth will last long enough for these mechanisms to work.

However, in cases where inequalities grow too large (the tipping point for inequality seems to be dependent on a society's stage of development, with highly developed economies being more tolerant of income inequality) or citizens view the distribution of benefits as being unfair, the rising inequality can become a destructive force on growth *and* development.

Highly unequal distribution of income and wealth causes social tension and increases political instability. Attempts to redistribute income can come under attack by the rich through lobbying efforts and voting power that reinforces or encourages inefficiencies. It was mentioned earlier that money affords families numerous freedoms and that the absence of money all but eliminates them. A vicious cycle is created for those poor families because they have no power to alter their situation and no voice in affecting change (Thorbecke and Charumilind 2002).

> Income inequality is not only a problem for developing economies. It is, in fact, a growing concern across the industrialised world, including right here in Canada. From the mid-1970s to about 1990, Canada's real gross domestic product grew on a consistent basis outside the recession in the early 1980s. During that time period, there was very little gain in average real wages. The economy continued to grow from the mid-1990s until the 2008 recession, coinciding with strong growth in labour productivity. However, it was again the case that middle-class families in Canada saw their average real incomes stagnate. Behind the scenes, there was a shift in the distribution of labour income toward the highest income earners, and a shift in the distribution of business earnings away from labour income and towards profits (Russell and Dufour 2007).

Economic growth does not have to produce these types of results. There are situations where economic growth actually promotes broader development within a society and can lower income inequality. This is a case where growth in GDP goes beyond increased production and influences how society interacts (Friedman 2005). It could be described as a period when social inclusion strengthens through increased cooperation and trust.

Those who profit from the economic growth gain a vested interest in seeing it continue. The preservation of their new and higher incomes and standard of living become inextricably tied to the continuation of the economic expansion. This is especially true for new entrants into the economy because their relative position in society will have improved the most—and in times of great economic expansion the number of new entrants can be significant.

These "champions" of the new economy will promote policies that ensure its continuation and in doing so preserve their own new wealth. These policies often involve the distribution of opportunities and benefits in order to create more champions. This has important implications for the reduction of racial and gender barriers and other attitudes of intolerance, and can result in significant political and social progress (Friedman 2005).

Where economic growth is absent, real incomes can stagnate and even deteriorate. During such times, people become financially insecure, more close-minded, and less tolerant toward outsiders. The benefits of greater inclusion are not obvious to persons who feel their standard of living and relative position within society is threatened. In these times, positive social change is difficult and perhaps even impossible to attain since those wielding the most power become fixated on economic issues and their own financial security (Friedman 2005).

Putting these theories into the context of Nunavut, there are some obvious challenges. The economy needs skilled and experienced workers to fill positions in public administration, health, education, construction, fishing, and mining. Nunavummiut with those particular skills or the means of acquiring them are finding success. Nunavummiut without these skills and without the means to acquire them are losing out. The rising inequality demonstrated earlier is one result.

A critical point here is that this potential evolution in an economy will not simply happen on its own. If it did, Inuit would have seen greater outcomes from Nanisivik, Polaris, and Lupin Mines.

It is widely accepted that the market will not promote human development or social change on its own since it places no value on social welfare (despite benefiting from it a great deal). Therefore, public policy matters; that is, what matters is not simply economic activity, but rather the policies that give rise to it (Stiglitz 2005). Relevant and progressive policies can play an important role in improving the fairness and durability of the economic growth, and can bring about greater and more meaningful labour force participation. This is how economic differentiation can affect quality of life.

6.3.2 A New Focus for Organisational Capital

Development is not simply the achievement of some great end where people's lives are better and they are happier; that is, it is not simple the summation of wellbeing of all people in an economy (Barder 2012). If this were the case, one could dream up an endless number of unsustainable and inefficient solutions to achieve this end. Development is instead a state where people, firms, and institutions interact in a way that sustained progress towards this end is achieved. This turns development into a characteristic of how agents interact.

Throughout this report, many of the measurement tools used to evaluate progress have shown unequal results. We can conclude that Nunavut's systems do not have the development focus that they should. They must be capable of understanding and embracing the complexities within Nunavut's developing economy.

How can Nunavut bring this focus to its systems? Western culture has been one where, in the face of complex problems, we look to leaders to set out a grand vision, experts to draw up a detailed plan of action, and gurus to provide an infallible solution (Harford 2011). It is an engrained approach to planning that we design complicated programmes and track milestones as they are implemented.

Self-organising complexity requires far greater input from local knowledge holders. This doesn't abolish a leader's vision, planning, or the advice of knowledge holders, just that the solution must reflect and accommodate the strengths and weaknesses and stage of development of the agents within that system. Adaptation works by making small changes, observing the results, and then adjusting—innovate, experiment, test, and adapt (Barder 2012). It can be a slow process, requiring many years to bring real integration (more complexity) to a system. In that sense, it is an evolutionary approach that looks to string together hundreds of small, positive steps.

Learning to view development as a complex, adaptive system, understanding the types of connections that must exist between the different agents, and knowing that these systems are built through continual, small-scale adaptation and innovation helps to explain why past efforts in economic development have failed to deliver tangible development outcomes. It also highlights just how much change is needed to reorient Nunavut's approach to one focused on development.

This represents a new kind of investment in Nunavut's "organisational capital." It calls for more effort in aligning what are clearly different approaches to growth and development amongst Nunavut stakeholders, and gaining consensus on how to fund initiatives and on how progress will be measured. If communities are to be trusted knowledge holders and decision makers, the manner in which governments support and interact with them will change. This model has communities bearing a lot more risk than they do with the current process-driven funding models. Similar to government, a focus on development represents a dramatic change in how communities function. The increased responsibilities will require support in terms of finances, human capabilities, and cohesion.

6.4 SUSTAINABILITY

Sustainability is an important component in a society's quality of life. There are several ways to integrate the subject into the research and analysis. One method is to include it as part of each topic; that is, discuss sustainability in terms of financial wellbeing, human capabilities, and social inclusion, and as a part of the economic analysis in Chapter 5. Another method, the one adopted in this year's Nunavut Economic Outlook, is to look at sustainability as its own measure of quality of life in order to deal with specific issues where sustainability is the central concern.

Two topics are investigated for this chapter. The first is the sustainability of the subsistence economy in Nunavut. It offers Inuit a viable, productive alternative to full-time employment in the wage economy. Subsistence activities offer Inuit a means to mitigate any shortfalls in financial wellbeing by providing nutrient-rich food, material for clothing, and a potential source of income. These practices provide a direct link to Inuit culture, offer opportunities for skills development, connect Inuit to the land, and promote stronger communities and social inclusion through sharing. In the Nunavut Health Survey, 90 per cent of respondents said they believe it is important or necessary for them to be able to go out on the land (Inuit Health Survey for Adults 2011). This is a unique circumstance in Canada and indeed for much of the world.

Beyond the practical importance and cultural and spiritual connection that land-based activities provide, it might influence out-migration by slowing the pace of deruralisation. In this sense, sustainability takes on a literal definition in Nunavut. A collapse of subsistence activities would be catastrophic, affecting financial and social elements of quality of life and bringing increased poverty to some communities. Sustainable communities is the second topic discussed in this chapter.

6.4.1 Benchmarking Subsistence Economic Activities

Studying Nunavut's subsistence economy from the perspective of economic growth or quality of life presents some challenges. Data limitations on participation and production within the subsistence economy mean that its study must rely on indirect or circumstantial evidence. Economic data associated with traditional economic activities such as total output (e.g. number of caribou harvested), cost (e.g. total dollars spent in harvesting caribou), and productivity (e.g. time and money spent on a per animal basis) are not known. Instead, a lot of what is known is based on scientific research of the stock (or supply) of animals and fish, and some research findings on the consumption (or demand) for these products.

For example, scientific research on caribou has increased significantly over the past decade and is providing more accurate data on the supply conditions of various herds. This doesn't say anything about the number of animals harvested, however. Production data of this nature is purely anecdotal. Annual harvest numbers have a lot to do with the migratory route taken by caribou, with more animals harvested in years when the herd travels closer to a community. And in years when this does not happen, the cost per animal rises significantly in part because of the greater distances travelled and in part because the success rate of the harvest declines.

Efforts to benchmark subsistence activities highlight the need for better data within and across Nunavut. Without the data, catastrophic events such as the closure of a caribou harvest would not be understood from a sustainability context.

Note that the discussion is focussed on caribou, but this methodology could be applied to other species consumed including seal, whale, birds, and fish where the data are available.

6.4.1.1 "Supply" of Caribou

Table 6-13 contains the name and status of caribou herds in Inuit Nunangat as reported in 2010 (Gunn, Russell and Eamer 2011). At the time this report was released, 9 of the 17 herds identified across northern Canada were said to be decreasing, 3 were stable at a low population level, and 2 were increasing.

The status of some of these herds has since changed. New research and more acceptance of Inuit knowledge is bringing new evidence to the debate. For instance, in 2011, a study discovered that the Beverly Herd, previously thought to be on the verge of extinction, had relocated north of its previous range. The same study found other herds, including the Cape Bathurst, Bluenose-West, Bluenose-East, Bathurst, Beverly, Qamanirjuaq, and Lorillard barren-ground subpopulations were "robust" — and not near extinction (Nagy 2011). This particular finding is one of the few that has shown herd sizes are improving.

A study of the South Baffin Island caribou population found that the downward trend for that population was much worse than previously thought, estimating the current number of animals to be between 1,065 to 2,067 (95% CI)

Table 6-13

Trends of Northern Caribou Populations, 2010	
Herd Name	**Direction of Change**
Porcupine	Increasing
Cape Bathurst	Stable at low population
Bluenose West	Stable at low population
Bluenose East	Increasing
Bathurst	Decreasing
Dolphin and Union*	Stable at low population
Ahiak**	Decreasing
Beverly	Decreasing
Qamanirjuaq*	Decreasing
Lorillard	unknown
Wager Bay	unknown
Peary	Decreasing
Southampton Island	Stable at mid to high
North Baffin Island**	Decreasing
South Baffin Island*	Decreasing
Leaf River*	Decreasing
George River	Decreasing

Notes: Not all herds enter Nunavut. * Under study; ** Preliminary data
Source: Gunn, A., Russell, D. and Eamer, J. 2011. Northern caribou population trends in Canada.

(Jenkins, Goorts and Lecomte 2012). Estimates of this population of caribou made in the 1990s determined there were between 60,000 and 180,000 animals at that time.

In stark contrast to the trends reported in 2010 and shown in *Table 6-13*, the Southampton Island herd is now believed to be on the verge of extinction. This happened once before in the 1950s. Caribou were reintroduced in 1968 and the herd grew to 30,000 by 1997. Scientists from the Government of Nunavut reported that by June 2011, a combination of over-harvesting (in large part for commercial purposes) and disease has reduced the herd to just 7,800 animals (Campbell 2012).

6.4.1.2 "Demand" for Caribou

The demand for traditional foods is more difficult to assess accurately. It is generally thought that the consumption of country food is decreasing on a per capita basis, however, total demand is harder to assess given the influence of a growing population. Recent country food markets in Iqaluit have been popular, which could be a reflection of rising incomes from the Inuit population that have migrated to Iqaluit for the purpose of employment and don't have the opportunity to participate in harvesting activities themselves. It could also be a reflection of the declining South Baffin caribou population, which is forcing Inuit, who would normally harvest their own animals, to seek other means to acquire caribou meat. These markets are not regulated in a way that will produce good data, but could become a source of anecdotal evidence of demand and pricing.

An intercommunity transportation subsidy for traditional foods was introduced shortly after the Nutrition North program replaced the Food Mail program and is reportedly very popular. The airlines have not released the corresponding data, but have said shipments of traditional foods tripled almost immediately after the new rates were introduced. It is thought that much of the food being shipped is between family members; however, the subsidy has made small-scale, unregulated, commercial operations viable where Inuit sell caribou over the Internet. The benefit is Inuit in regions without its own source of traditional food or where the source is depleted have access to this nutritious food. Shipments of traditional food also provide a source of income for sellers.

The cost however is the stress placed on herds that might not be able to sustain the increased harvest. In a report presented to the Nunavut Anti-Poverty Secretariat, scientists from the Government of Nunavut said in respect to conservation and sustainability they did not favour the idea of assisting communities in purchasing caribou meat from harvesters (Giroux, et al. 2012).

Clearly, there is an increase in demand for country food amongst a segment of the Inuit population. Some of the evidence is pointing to intra-territorial migration and rising personal incomes as the reasons for the demand. Whatever the reason, a new market for country food is being born. As the number of buyers increase, we should expect to see a rise in price followed by an increase in active suppliers. The idea of professional hunters has not been widely supported across Nunavut in the past, but it could be a part of the territory's future. The absence of regulation could one day become a problem, especially with regard to food safety.

In Chapter 4, it was reported that Nunavut's population could rise by as much as 14,400 in the next 20 years. There was some pondering over what impact that population will have on the demand and supply of country food. In this chapter, we are learning that the demand is going up. We are also learning that the supply might not be.

By contrast, numerous studies over the past decade on Inuit diet are finding country food consumption amongst Inuit is declining, especially amongst younger Inuit.

- A study looking at nutrition and food consumption in Nunavik found that traditional foods supplied 16 per cent of total calories in comparison with 84 per cent supplied by store-bought foods. The contribution of traditional foods to energy intake was higher among older Inuit (28%) than among young people (11%) (Blanchet and Rochette 2008).
- A study conducted in 2010 in the Kitikmeot region noted the rapid nutrition transition currently underway within the Inuit population putting it at high risk of chronic disease (Hopping, et al. 2010). The study found inadequate consumption of dietary fibre, calcium, folate, and vitamins A, D, and E by 60 per cent to 100 per cent of all men and women.
- A study on the changing dietary patterns and body mass index in Canadian Inuit communities between 1998-99 and 2007-08 concluded there was a significant decrease in energy contribution from traditional food and a significant increase in market food consumption over time. Sugar-sweetened beverages, chips, and pasta all increased as percentages of energy [calories]. At the same time, the body mass index rose in women and in each age group studied (Sheikh, et al. 2011).

How can we reconcile the two findings? Demand for country food is going up within one segment of the population while the consumption of country food is declining in another. Perhaps the two will balance out, but probably not. Both trends need to be followed closely and any policy intervention should be given careful scrutiny to ensure it doesn't inadvertently test the sustainability of Nunavut's country food supply.

In the original Nunavut Economic Outlook, there was a discussion on the future of the traditional economy as the territory grew and increased its level of industrialisation. The thoughts at that time were that this particular economic pursuit would not be one where growth would occur, but it was a productive option for Nunavummiut until such time as the wage economy grew enough to offer everyone a job, should they want one. But even at that time, there were some concerns expressed over the future viability of some country food sources and that increased pressure from a rising population would jeopardise some aspects of the non-wage economy. Twelve years later, there are 8,000 more people living in Nunavut, most of whom are Inuit, and there are numerous reports that caribou populations have declined or their migratory patterns are taking them further and further away from existing communities.

What does this do to the sustainability of communities? In particular, what will the impact be on communities that are not regional centres, do not have decentralised government offices, are not in close proximity to a resource development project, and have been shown to have high rates of poverty and food insecurity? These factors can test the sustainability of a community in a very literal sense if it results in some residents looking to migration as a means to escape the absence of productive options in either economy.

A loss or sharp decline in subsistence activities and country food sources would test the sustainability of some communities in a very literal sense.

6.4.2 Sustainable Communities

Sustainable communities are places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all (Government of the United Kingdom 2003).

Some of these elements of a sustainable economy will be tested in communities facing rapid economic growth brought on by a major project. They highlight the need for added collaboration where agents are able to work together and adapt to a changing environment. Three such concerns include the implications of a Fly In/Fly Out (FIFO) work rotation on a community, the implications of a rapid increase in personal disposable income, and the impacts from a large influx of migrants.

The two-week rotation employed by mining companies throughout the world is hard on families and is not suitable for everyone. The stresses on family can create many problems. Without some form of child support (or daycare), FIFO work all but eliminates the chance for one's spouse to work, which can cause financial problems, resentment, and boredom. Agnico-Eagle Mines noted that extramarital affairs, tension between couples, and jealousy affect its Meadowbank Mine staff (Agnico-Eagle Mines 2012). These actions and feelings can have terrible consequences that include substance abuse, violence against women, and sexual assault. From the mine operator's perspective, problems with relationships are a constant source of absenteeism and turnover. The FIFO work also has broader effects on a community. At any given time, it could mean that 50 to 100 men are absent from the community. This can result in a gender imbalance that is a source of problems.

In Australia, where FIFO work is common, communities have created an integrated network of support groups. These groups serve two key functions. The first is purely social. FIFO work creates loneliness within families. Support groups organise family events of all kinds to increase community and family spirit, to create opportunities for FIFO families to get together, share stories, and establish friendships. The second is household support. This can include financial advice for when money questions arise and a family member, who would not normally do so, must make a financial decision. It includes support for household maintenance. Learning sessions are organised to teach spouses how to take care of simple plumbing, electrical, or automotive issues that might occur while their partner is away. It includes parenting support by offering courses on childrearing, by helping families find daycare, and creating ride share programs to get children to and from school.

Not all of these examples apply to a Nunavut community. But they do offer evidence that proactive options exist and that they work. How such programs could be developed and how they would function in Nunavut is something for the community to decide, but there is strong evidence that these groups are effective in combating the ill effects of FIFO work (Impact Economics 2013).

A second threat for a sustainable community stems from the large influx of disposable income into a community that can be disruptive if and when people make poor choices with that newfound wealth. For the most part, the discussion of mismanaged money revolves around the excessive consumption of alcohol and drugs, gambling, and frivolous spending. These acts can be devastating to the individual, their family, and community. It can spark violence, theft, jealousy, and the destruction of property. Communities must respond with increased policing, shelters for women and children, and social services. But these reactions are expensive to the point of being unaffordable and don't do anything to address the negative behaviour. It is also often the case that these responses come too late.

A third pressing concern is the influx of people. A large in-migration can disrupt a community, it can effect the cultural balance, create rifts between community members, can highlight inequalities, and can place tremendous strain on community infrastructure, including housing.

These three issues, the introduction of FIFO work, a sudden rise in disposable income, and greater in-migration are presented as potential challenges in creating sustainable communities. But all of these issues, more work, more money, and more people, are also critical elements in growing a community's economy and its financial wellbeing, and offer a means to invest in other development areas. Remember that a vibrant economy is a necessary element in a society's overall quality of life. But as was also highlighted throughout this report, a growing economy cannot be left alone to provide these benefits, just like a community cannot ignore issues that threaten its sustainability in hopes that it is somehow immune to the negative outcomes.

Creating an environment where a growing economy brings positive outcomes to a community requires actions that are virtually identical to those needed to fend off potential threats to the community's sustainability. Understanding the nature of the opportunities and threats and establishing a proactive approach to dealing with them are necessary conditions in creating a sustainable community.

7 ECONOMIC GROWTH

Key Highlights

- Economic growth is the means to achieving a high and sustainable quality of life. A forecast of future economic activity can thus be an important part of a society's development plans. It sets the parameters from which it can improve financial wellbeing, human capabilities, social inclusion, and sustainability.
- In Nunavut, the growth of population is important, not only because it establishes many of the future demand and supply conditions within the local economy, but because a majority of its government's revenues are generated from transfers from the federal government that are based, in part, on population growth.
- The growth path of Nunavut's GDP will be shaped by the introduction of large resource development projects over the next several years. On average, GDP could grow between 4 per cent and 5 per cent during that timeframe.
- One of the problems with using GDP as the measure of economic progress is that it hides important changes in the economy that occur at the same time as the start up or completion of a major project.
- There are several important construction projects that will make important contributions to Nunavut's economy in the next five years, but will barely register when set beside the Mary River or Meliadine projects. Similarly, important advances in fishing, tourism, and the arts sector cannot be fully appreciated through an analysis of their contributions to GDP.

7.1 AN ECONOMIC FORECAST: DO WE NEED ONE?

The Nunavut Economic Outlook has always concluded with a prediction for economic growth based on a detailed assessment of population, industrial opportunities, spending intentions of the public and private sector, and investments in human, social, natural, and physical capital. The result was a single time series depicting the future growth path of GDP. This is very much the traditional approach.

With the introduction of a new Framework for understanding and measuring development, including a traditional forecast of GDP should be reconsidered. One of the issues with ending each Outlook with an economic forecast has been that it presented a future that conflicted with some of the findings from the research. This is not because the forecast was inaccurate, in fact, as economic forecasting goes; the Nunavut Economic Outlook has a good track record. The conflict was between the often-poor results found in the investigation of progress in the four forms of wealth-generating capital and the generally positive results from the investigation into Nunavut's potential economic growth. It was too easy to conclude that the poor socio-economic conditions would be resolved once the economic potential was realised. It effectively turned concern into optimism despite the absence of any clear instructions on what Nunavummiut could do to make this transformation happen.

The new Framework erases any temptation for such distraction by focusing squarely on the goals of development. This Outlook has presented material in a manner that should help facilitate this new focus. It is clear from the sector analysis in Chapter 5 that opportunities for economic growth exist throughout Nunavut. There can be some debate perhaps regarding the timing of some projects and exact pace at which growth will occur. But by in large, there should be a consensus on the majority of opportunities for Nunavut's future economy as presented. This is not to say Nunavut's economy can be ignored. After all, most of the opportunities are not yet realised. But, if a consensus can be established on the main components of Nunavut's economic future, it allows us to focus more intently on how the territory might innovate, experiment, test, and adapt to these opportunities, ultimately turning economic growth into a high and sustainable quality of life.

It remains important that a forecast of the economy is included as part of the research into Nunavut's progress. Where the economy will grow and by how much establishes the means from which Nunavummiut can reach their goals. What changes, however, is the way the forecast is presented. As a tool for measuring development, it is less critical to predict the precise growth path of GDP. We still need to know some of details though:

- The trends in underlying growth factors;
- The size and timing of major projects;
- Any significant investments in infrastructure being planned by the public or private sector;
- Any opportunities for growth in the different sectors within the economy; and
- Any risk factors that might affect the future economy.

In this chapter, the important details regarding Nunavut's future economy are laid out. Demographic projections from Chapter 4 are summarised to establish the underlying population growth for the territory. The major projects described in Chapter 5 are then reintroduced to establish the economic events that will alter Nunavut's underlying growth path. The known infrastructure projects are also reintroduced, as are the opportunities throughout Nunavut's economic sectors. Together, these details help to form a clear understanding of Nunavut's economic growth. The final section brings the discussion back to one focussed on development. How can this economic growth help the territory and its citizens reach their ultimate goal of a high and sustainable quality of life?

Major projects alter the path of GDP by so much that any great success or failure in other sectors of the economy goes unnoticed by this measure. A doubling or tripling of activities in tourism, arts, or fishing would barely register if they were to occur the same year a mining company spends a billion dollars on construction. It also doesn't help in understanding the regional nature of this growth. GDP hides too many important stories to rely on it exclusively.

7.2 LONG-TERM ECONOMIC GROWTH AS A FUNCTION OF POPULATION GROWTH

Population growth is the most important variable in assessing long-term economic growth. The size of population gives a sense of such things as future consumer demand, the changing demand for public infrastructure and services, and the size of the potential labour force.

In Nunavut, the importance of population growth is emphasised by the fact that 90 per cent of government revenues are generated through transfers from the federal government that uses population growth as a key variable in determining the amount to be transferred. Add to this the fact that government spending constitutes the largest component of Nunavut's domestic economy, and one can see that understanding long-term, underlying, economic growth in Nunavut comes from an understanding of population growth.

In Chapter 4, the predictions on population were assessed in terms of six scenarios that differed according to fertility rates and migration (see *Table 7-1*). The variation in these two variables was kept reasonable in order to generate plausible results. The range of possible population growth scenarios was from a low of 44,525 to a high of 49,113. The average of these scenarios would see the total population grow to approximately 47,000, which represents a 35 per cent increase from 2013 or a 1.5 per cent annual growth (compounded annually), equal to almost 12,300 more Nunavummiut by 2032. *Figure 7-1* depicts what the distribution of this increased population would look like. *Figure 7-2* shows the annual growth in population from 1999 to 2032 using the average of the six scenarios, which forms the basis for Nunavut's long-term, underlying growth.

Table 7-1

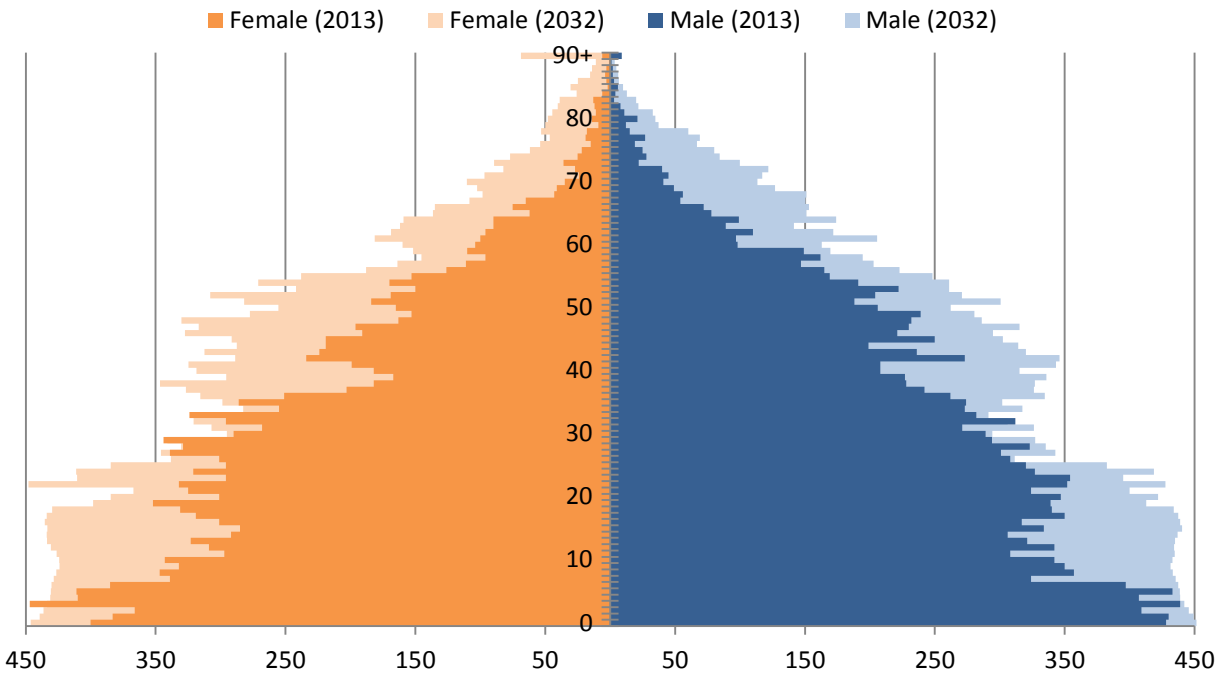
Population Scenarios, Total population by 2032

	Fertility Rates		
Migration	**Unchanged**	**Decline to 2.6 by 2032**	**Decline to 2.2 by 2032**
Zero Net Migration	49,113	48,023	46,746
Historical Average	48,193	45,765	44,525

Source: Canadian Institute for Health Information

Figure 7-1

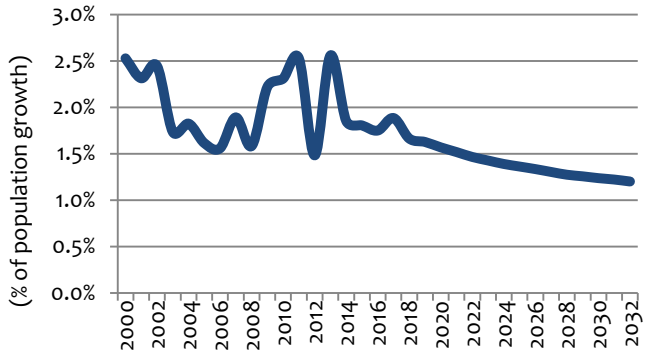
Distribution of Nunavut's Population, 2013 and 2032



Source: Statistics Canada CANSIM Table 051-0001 and Impact Economics.

Figure 7-2

Population Growth, 1999 to 2032



Source: Statistics Canada CANSIM Table 051-0001 and Impact Economics.

7.3 OPPORTUNITIES FOR ECONOMIC GROWTH

The analysis of economic conditions and opportunities presented in Chapter 5 provides a detailed description of key elements in Nunavut's economic future. The biggest economic events (if measured by dollars and cents) that are most likely to occur within the next five years include the Mary River Iron Mine (Early Revenue Project) and the Meliadine Gold Mine, and the closure of the Meadowbank Gold Mine. A summary of the relevant mining numbers is presented in *Table 7-2*.[21]

The growth in terms of GDP created by these projects was added to the underlying growth assumed from the population projections. The result is the economic growth scenario depicted in *Figure 7-3*.

The figure does not represent a definitive prediction of the future growth of Nunavut's GDP. It is one scenario amongst many. It does however demonstrate the magnitude of change that would result from the three mining projects proceeding according to the timetable shown in *Table 7-2*.

The major infrastructure projects described in Chapter 5 were then added to the new growth path. This included CHARS, the Iqaluit International Airport, and the Nanisivik Naval Station. Spread out over a number of years, they will cause GDP to grow by $10 to $35 million in a given year.

[21] The figures contained in this table are meant to be general. The start date for Meliadine is not known. The spending and employment are estimates based on company documents and knowledge of similar projects elsewhere. GDP estimates are based on historical gross output to GDP ratios.

Table 7-2

A Mining Scenario for the next five years

Mine	Start Date	Spending[1]	Employment[2]	GDP[1]
Mary River Construction (Early Revenue Phase)	2013	$740 million	750‡	$245 million
Mary River Production (Early Revenue Phase)	2015	$100 million	420*	$40 million
Meliadine Construction	2016	$1 billion	1,500	$350 million
Meliadine Production	2019	$350 million	700	$125 million
Meadowbank Closure	2018	($350 million)	(675)	($125 million)
Mary River Construction (Full Project)[3]	2015	$4+ billion	2,000+	$1 billion
Mary River Production (Full Project)[3]	2019	$400 million	950	$175 million

Notes: 1) Spending and GDP estimates during construction are total, whereas spending and GDP estimates for production are average annual. 2) All employment figures are presented as average annual. 3) Baffinland Iron Mines presented adjusted figures for the original project as part of its addendum to the Environmental Impact Statement. ‡ the 750 figure represents total payroll, on-site construction jobs will average 600. * the 420 figure represents total payroll, on-site workers are estimated to be 210.
Source: Baffinland Iron Mines, Agnico-Eagle Mines, Impact Economics.

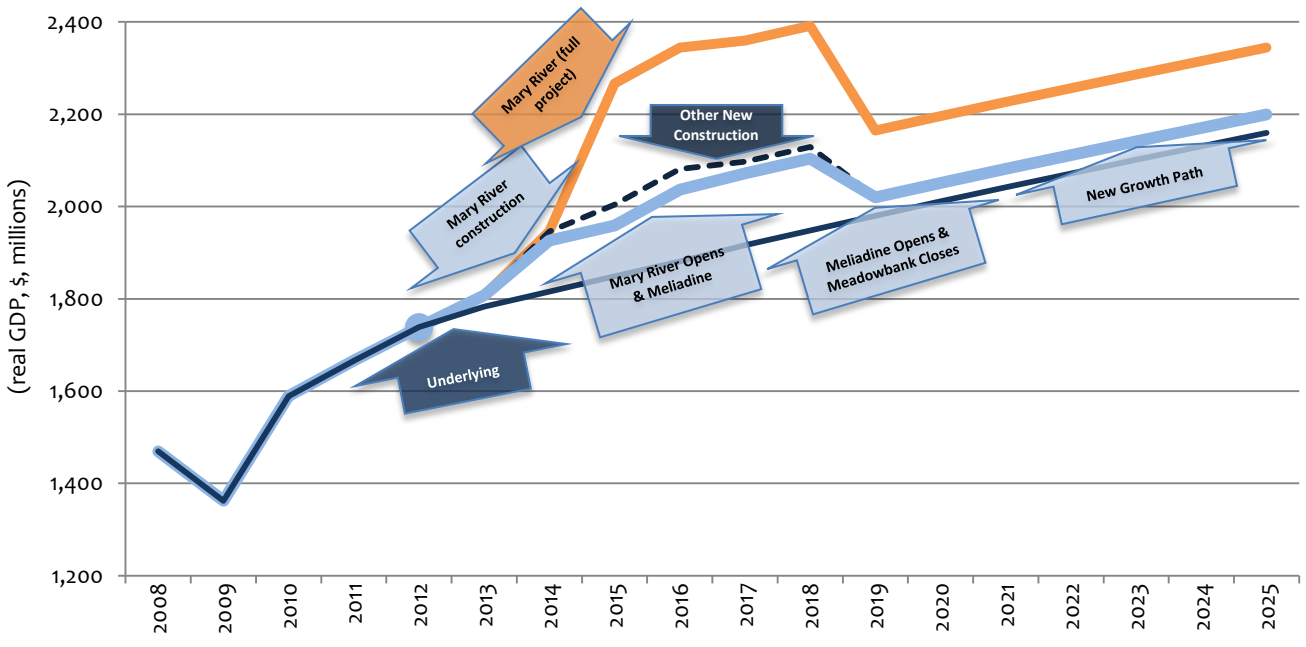
With the addition of the construction projects, a new economic scenario is created. In this case, GDP will grow by an average of approximately 5 per cent annually for the next five years. The figure helps visualise the relative size of these projects compared to the new mining projects and the overall economy.

The full $4 billion Mary River project was added last. With this project, it is clear that the growth path of GDP will make a significant turn. The first full year of construction could cause GDP to rise by 15 per cent or more, depending on what else is going on in the economy that year.

Opportunities for growth in other sectors must also be considered, but they are more difficult to highlight in a macroeconomic forecast that includes several major projects.

Figure 7-3

Building Blocks of an Economic Forecast, real GDP, $millions



Source: Statistics Canada CANSIM Table 051-0001 and Impact Economics.

Most other economic activities occur at a relatively steady pace. New projects replace ones that are ending. The growth rate fluctuates a little as a result of some projects being larger or smaller than the ones they are replacing. Otherwise, the collective growth of these activities will follow closely the growth in population, and is thus captured in the underlying growth as depicted in *Figure 7-3*. There are many examples:

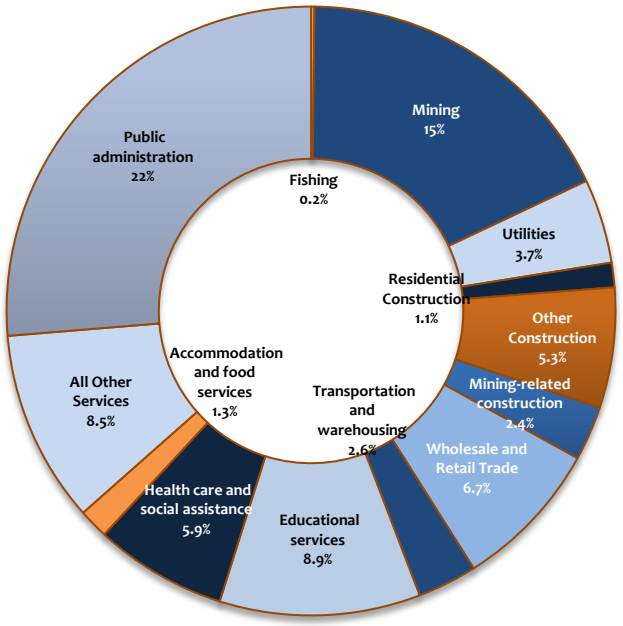
- The size of government's contribution to the economy is a function of the transfers it receives from the federal government which tend not to fluctuate. In addition, the number of schools and schoolteachers do not fluctuate all that much and nor does the number of health care facilities, doctors, or nurses.
- Growth industries such as fishing and tourism have been making great strides recently, but these improvements don't translate into significant impacts in GDP.
- Utilities (power and energy) represent a sizeable part of Nunavut's economy when measured by GDP, but the amount produced each year does not vary by much.
- Residential construction can change year-to-year as a result of special-purpose transfers from the federal government for social housing, but over a 3 to 5 year time frame, even this component of the economy tends to level out.
- Other large components within the economy, such as retail trade, are also quite stable, increasing alongside any gains in labour income.

These economic activities are noted because they all make important contributions to Nunavut's economy (see *Figure 7-4*). For example, it was noted earlier that the tourism industry employed more Nunavummiut in the past year than mining and construction combined. It's just that changes in their contribution to GDP are too subtle to be meaningful when measured alongside a billion dollar mining project.

If Nunavummiut in the North Baffin and Kivalliq regions want to improve their financial wellbeing, human capabilities, social inclusion, and sustainability, they will need to find a way to make the major projects coming to their communities work for them. A passive response will not do. Communities must proactively prepare in order to positively influence the outcomes in all facets of community life, whether labour force participation, education, preservation of culture, community cohesion, safety and security, or housing,

Figure 7-4

Relative Contribution of Selected Industries to Nunavut's GDP, percentage of GDP, 2012



Source: Statistics Canada CANSIM Table 051-0001 and Impact Economics.

7.4 TURNING GROWTH INTO PROSPERITY

What readers should take from this forecast is that Nunavut remains a region with tremendous economic potential, and it appears that the territory is closer than ever to realising some (though not all) of it. Should the mining sector grow as outlined, the large construction projects all proceed as scheduled, and the remaining sectors grow (at least) as usual, Nunavut's economy should grow at a strong pace for several years, averaging 4 per cent to 5 per cent over the medium term. The full Mary River Project would cause an additional 15 per cent jump if and when its construction starts.

What does this mean? Until we learn whether it can be shaped in a way that delivers real consequences for Nunavummiut, the prediction really doesn't tell us enough.

A central theme of this year's Outlook has been that there shouldn't be a debate on whether one is for or against economic growth. Instead, society should be giving far greater attention to *how* the economy is growing and work at creating real and positive consequences from that growth; that is growth that is sustainable, that increases living standards not just today but for future generations as well,

and that leads to a more tolerant, open society (Stiglitz 2005).

What is a "Strong Economy" anyway?

It is a favourite term of economists to give a region the title "strongest economy in the country." But do the titleholders really deserve such accolades?

What economists are referring to is the growth rate of GDP. If it's the highest of all provinces and territories in any given year, it gets the title. That's it. How the economy is growing, who is benefiting, and what costs are incurred do not factor into the discussion.

To be given the title "strong economy", a region's economic growth should really be vibrant (many components within the economy are operating efficiently and productively), the growth should be durable (it should last for more than a year or two), it should be fair (its proceeds should be distributed appropriately with the local region receiving an adequate share), and it should be moral (it should bring greater social justice, more openness, less poverty, and fewer barriers to participate).

Very few, if any, economies can produce all of these outcomes all of the time. That's okay. It is very much something to strive for through policy and planning, investment, participation, and cooperation. So, instead of lofty titles like "strong economy," economic growth should be described for what it is or at least what it is intended for—namely, as a means to an end, whether that end is defined as improved wellbeing, a high and sustainable quality of life, or simply as greater happiness.

Not every economic activity or output will offer these great moral consequences, but it is important that a society, as a whole and in its parts, recognises its role in transforming the way it functions such that these outcomes are achieved on a more consistent basis. This is of particular importance for developing economies because of the absence of adaptation, innovation, and complexity within its system.

Looking at the many different economic opportunities presented in this year's Outlook and the different communities that will be affected by them, there won't be a single approach that will enhance wellbeing in all cases. Chapter 6.4 included a discussion on the increased jobs, money, and people that economic growth brings and how this can be the catalyst for prosperity for a community, but how it could also be the source of great problems. That conversation deserves further consideration because it is really a discussion about turning growth into prosperity.

Looking at how other communities have dealt with sudden economic change offers a useful starting point (recall that in Chapter 6.4.2, an example of how Australians are coping with FIFO work schedules was given). Communities all around the world and at every stage of development have endured periods of rapid economic growth. How they responded and how they faired with the increased jobs, money, and people is valuable information for Nunavut communities that are on the cusp of their own period of change. At the same time, the solution devised by communities, governments, and the experts they hire must recognise the contribution of local knowledge holders and take proper account of the stage of development of the community. A so-called cookie-cutter approach doesn't work and should be rejected.

For instance, Baker Lake's successes and failures in their relationship with Meadowbank offers insight that would be useful for Rankin Inlet and Pond Inlet in their preparations. But these three communities aren't similar enough to think the model used by one will work for the other. At Nunavut's current stage of development, turning growth into prosperity will require a far more individual, community-based approach.

At the regional or territorial level, adopting a similar development-oriented approach can support a community's actions. The Framework for Development introduced in this Outlook promotes experimentation as a mechanism for systems within communities and regions to evolve rather than using outside planning and isomorphic mimicry. As such, results-based funding models should be promoted over the current process-based model (Barder 2012). This brings about the need for greater clarity on a community's goals, and demands far better and more detailed monitoring—both of which would likely offer benefits of their own. It also requires more responsive government programming.

The idea of promoting experimentation, as suggested by a results-based funding model, would seem to preclude funders from subjecting their contribution to appropriate due diligence. But experimentation does not imply a lack of constraints. With funding tied directly to results, we would not expect wide swings in approach or greater risk taking necessarily. In fact, any aversion to risk at the community level might have the opposite effect, causing communities to take greater care when developing a new program to ensure funding levels are maintained.

In adaptation theory, experimentation refers to small changes, observing results, and adjusting through constant learning. Ineffective or bad changes are suppressed or eliminated, while positive or good changes are promoted and reproduced (Prichett, Andrews and Woolcock 2012). This could prove a useful approach for Nunavummiut who understand that major projects will bring pressures to their communities but are uncertain as to how to prepare for and then manage them. We simply cannot expect that a plan, whether introduced from southern Canada, another Nunavut community, or even one designed by members of that community, would work on all fronts without any adjustments or innovations. Allowing for evolution in action plans within funding agreements makes sense.

Still, governments would initially have difficulty with this model. Finding opportunities for small pilot projects and promoting some limited experimentation within government programming might be a way to start. Alternatively, non-government organisations might be better suited to take a lead role in this experimentation in funding. NGOs advantage in program delivery has always been their ability to adjust quickly and easily to changing circumstances—which actually makes them experienced users of adaptation theory.

Progress towards greater prosperity when measured by development outcomes can be slow, and is certainly slower than changes in economic outputs. This can be a challenge in moving public policy toward the development approach. It necessitates that when opportunities for economic growth are being evaluated and measurement parameters are being established, the focus is on those positive or moral consequences (measures of development) described throughout this report rather than on more traditional economic indicators.

Looking beyond GDP in the study of Nunavut's progress toward a high and sustainable quality of life has been a central theme of every Nunavut Economic Outlook since its inception. If this concept is to be fully embraced, then the new metrics introduced alongside and in place of GDP should be applied. Doing so can bring about important changes in the way growth and prosperity are discussed, which paves the way for important changes in approach to managing growth and development, as well as influencing policies, planning, and funding.

8 SUMMARY OF NUNAVUT'S GROWTH AND DEVELOPMENT

Key Highlights

- The Nunavut Economic Outlook is a report focussed on the development of Nunavut and on measuring progress toward a high and sustainable quality of life.
- The past few years have been good ones for Nunavut's economy. Turning its economic growth into prosperity for people and for communities is the territory's next great challenge.
- We conclude that the outlook for Nunavut's economy is positive, but there is no room for complacency. Nunavummiut must continue their efforts to build a diverse economy with mining, fishing, tourism, arts, construction, transportation, and science playing important roles.
- While there has been an increase in employment levels and average personal income is now in line with the Canadian average, there are still many Nunavummiut who are not participating in the economy (for a number of reasons) which has given rise to an increase in inequality. This division between rich and poor can be observed in numerous economic and social datasets and it is clear that the gap is widening.
- Closing this gap presents an overwhelming list of challenges. Nunavut will have to innovate, experiment, test, and adapt; a process that must be repeated many times over at the community, regional, and territorial levels. Progress must be measured by the hundreds of small victories achieved in the slow march towards a high and sustainable quality of life.

The subtitle of this year's *Nunavut Economic Outlook* is Nunavut's Next Challenge: Turning Growth into Prosperity. It suggests that the economic growth challenge has been met and that Nunavut must now turn its attention to capturing the benefits that will soon start flowing.

There is no doubt that Nunavut's economy is in a better position than it was five years ago, and is vastly ahead of where it was ten years ago, but a word of caution is probably needed before turning exclusively to this next challenge.

This year's Outlook contains details on how and where Nunavut's economy will make important gains over the next several years.

- Mining should see two new operations within the next five years (though it will lose one along the way) and just beyond that timeframe, there are several other projects that, under the right set of circumstances, could be developed.
- Several opportunities in the fishery were described. A larger quota, more and better equipment, and more local participation are already adding to the industry's success. It still needs some important infrastructure to bring more of the downstream benefits of the fishery to Nunavut, however, and an expanded inshore fishery would further expand its contribution to the prosperity of Nunavummiut.
- Government is not typically seen as a sector from which economic growth can be achieved, but over the next several years, a number of major government-sponsored construction projects will do exactly that. Together, the construction of CHARS, the Nanisivik Naval Facility, the Iqaluit International Airport, and $100 million for social housing represent a considerable investment of public money into Nunavut's infrastructure.
- The tourism industry has a new strategy. It provides a more focussed approach to advertising, sets out key areas where product and service development is needed, and should result in better coordination throughout the industry, all of which will translate into tourists spending more time and more money in Nunavut.
- The arts sector and cultural industries actually envisions its overall production declining in the near future as a result of existing and potential artists being attracted to jobs in mining or construction. Stakeholders within the

industry are looking to turn this into a positive by focussing attention on emerging and master artists and exploring a growing market for Inuit artists working with new mediums and on modern themes.

This list of economic opportunities is not complete by any means, but it highlights some areas where we anticipate success. There is also no mention of potential threats or disruptions that could turn the good news story into a negative one.

In addition to describing the long list of opportunities present in Nunavut's economy, this year's Outlook contained cautionary notes on some of the bigger news items. There is a lot of certainty associated with the forecast, such as the planned public-sector investments, Baffinland Iron Mine's *Early Revenue Phase* that is now officially underway (though there remain a few regulatory-type issues to be finalised), and new allocations in the fishery that were announced in November. But other important projects lack this level of assurance. In particular, the world's mining industry has had some tough times over the past year or two with the sharp declines in commodity prices. For the sake of prudency, we must inject some uncertainty into any advanced mining project that is not currently in production or in development. Stronger commodity prices would eliminate this cautionary note, but weaker prices would all but cement it in place for the next several years.

We can still conclude that the outlook for Nunavut's economy is positive, but that there's no room for complacency. Nunavummiut must continue their efforts to build a diverse economy with fishing, tourism, arts, construction, transportation, and science playing important roles.

From this analysis of Nunavut's economy, our attention can turn to a central theme of this year's Outlook: the challenge of making economic growth the means to greater prosperity for all Nunavummiut, which requires a detailed investigation into Nunavut's progress in development.

This investigation was presented in Chapter 6. The analysis was organised under four measures of development that were introduced in the new Framework, namely, financial wellbeing, human capabilities, social inclusion, and sustainability.

Financial wellbeing means having the financial resources to live a life fulfilled. Gaining greater financial freedoms is one of the real consequences of economic growth. The research looked at employment and income and found a divergence of fortunes within the population. This division between rich and poor can be observed in numerous economic and social datasets and it is clear that the gap is widening.

The income inequality in Nunavut is associated with participation in the economy. Either you have a good job and are doing well financially, or have no job or a low paying job and are struggling to afford of the essentials of life.

The overall number of Nunavummiut with a job was higher in 2013 than ever before. The unemployment rate has gone down, while employment and participation rates have gone up. Overall average personal income across Nunavut is now in line with the Canadian average. This signals a continuation in the trend towards more middle-class Inuit families throughout Nunavut. This is the good news coming from this year's Outlook.

More and more Nunavummiut are finding success in their adaptation to the demands of the growing economy and are seeing improvements in their financial wellbeing, human capabilities, and social inclusion as a result. Unfortunately, this experience is not universal. There are still too many Nunavummiut who are not participating in the workforce. Impediments to employment appear to be a combination of low levels of education, a mismatch in skills, poor mobility, a welfare trap, and possibly a lack of interest.

These are largely structural challenges in Nunavut's labour force and are rooted in discrepancies in human capabilities and social inclusion.

Human capabilities are those factors that allow individuals to live lives that are valued, something that is often determined by decision making and critical thinking and that affect one's ability to transform their own resources into improvements in quality of life.

Social inclusion can be described as the strength of connection between people, community, government, and institutions. Some would call this the social fabric of a community. Some find it easier to understand social inclusion as being the opposite of social exclusion, which is the process of marginalisation through barriers to participation in economic, political, civic or cultural life.

It is at this point in the research that the depth of Nunavut's challenge in achieving a high and sustainable quality of life for *all* Nunavummiut is revealed. The rising income inequality is a grave concern not simply because it means some people are rich while others are poor, but because this financial disparity is really an outcome of widening differences in most other measures of development. Disparities were found in human capabilities and social inclusion as measured by edu-

cation, health, social wellbeing, living conditions, crime, food insecurity, homelessness, and community cohesion. Even our brief look into sustainability from the perspective of traditional Inuit activities and community sustainability revealed that there is an emerging divide between haves and have-nots within and between communities. Moreover, income inequality is increasingly being recognised as a factor that can influence economic growth.

How Nunavut can address income inequalities without unnecessarily or unfairly punishing Nunavummiut who have successfully adapted their own lives in order to improve their freedoms, quality of life, and happiness is one of the territory's great challenges.

This year's research found the performance of Nunavummiut in areas of health and education continues to lag far behind other Canadian jurisdictions. The poor outcomes in education are particularly harmful given the increasing need for a highly skilled workforce in Nunavut's economy. The 2011 NHS showed nowhere else in Canada is education more relevant to a person's employment and financial wellbeing than in Nunavut.

Housing is a constant challenge for Nunavut and has been described recently as reaching a state of crisis. There is a high and growing dependency on social housing and there are numerous gaps in the housing continuum that prevent upward movement out of social housing. At the root of this crisis is the fact that too many Nunavummiut cannot afford shelter.

There are many other examples. This divergence within Nunavut's development underpins the importance of establishing mechanisms that can transform the tremendous economic opportunities into opportunities for greater wellbeing. The challenge is so immense that thinking of a solution can be overwhelming. This gives evidence to a principle in the complexity theory described in this year's Outlook. We shouldn't fool ourselves into thinking that a solution can be engineered. There is no single great solution that will solve all of Nunavut's problems. Nunavut will have to innovate, experiment, test, and adapt; a process that must be repeated many times over at the community, regional, and territorial levels regardless of whether the economy expands or contracts. Progress must be measured and celebrated by the hundreds of small victories achieved in the slow march towards a better quality of life.

There is also a need for greater recognition of the complexity of Nunavut's challenge in development, and that an equally complex solution is required. This doesn't imply a complicated approach. In fact, the opposite is true. Complexity refers to the complete integration of stakeholder actions and support. Success will be found when there is consensus on how families and communities can be encouraged and supported in their adaptation to the economic opportunities present.

In adaptation theory, experimentation refers to small changes, observing results, and adjusting through constant learning. This could prove a useful approach for Nunavummiut who understand that major projects will bring pressures to their communities but are uncertain as to how to prepare for and then manage them.

Progress towards greater prosperity when measured by development outcomes can be slow, and is certainly slower than changes in economic outputs. This fact necessitates that when opportunities for economic growth are being evaluated and measurement parameters are being established, the focus is on measures of development in addition to traditional economic indicators.

The Nunavut Economic Outlook is a report focussed on the development of Nunavut and on measuring progress toward a high and sustainable quality of life. This focus requires that we look beyond GDP in our assessment. The introduction of new metrics can bring about important changes in the way growth and prosperity are discussed which will facilitate important changes in approach to encouraging growth and development that will ultimately result in Nunavummiut attaining a high and sustainable quality of life.

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