BCPROGRESSBOARD

STRATEGIC CONSIDERATIONS FOR BC'S FUTURE: ISSUES AND TRENDS 2007 REPORT

A Companion Discussion Paper to the Fifth Interim Benchmarking Report

BC Progress Board

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Summary and Overview

British Columbia's economy and society is rapidly changing, but continues to be shaped by many traditional forces as well. This report – based on the best available recent and forecast information – attempts to outline some of the major issues and trends likely to impact British Columbia in the near to medium term. Rather than make specific recommendations for government, business, community and individual action, this report sketches some strategic considerations for British Columbia's future based on available information. The intent is to help inform policymakers and the public-at-large about some of the key challenges and opportunities facing British Columbia with a view to ensuring the province continues to build on past progress and to continue to strive for excellence.

It must be noted that while this paper attempts to identify some of the main strategic considerations, it does not claim to have identified all factors that will impact British Columbia's performance. It is intended, however, to help British Columbians think about the province's future and how individual contributions will help address the critical issues and trends of our time. From today's perspective, it is hard to determine with any degree of precision the magnitude of change British Columbia will face or the nature of our economy and society as the province moves into the second decade of this millennium and beyond. Yet, some strategic considerations for BC's future can be predicted with a reasonable degree of certainty, and the main ones are briefly summarized below:

General

- ***BC's population will continue to age***, with the median age rising to 46.2 years by 2031 from 39.8 in 2006. By 2031 those aged 65+ will increase to 24.2 percent of the population in 2031 from 14.0 percent in 2006.
- ***BC's population growth*** will be concentrated in areas of the province that are already relatively dense: Greater Vancouver, Victoria, Nanaimo, Fraser Valley, Cowichan Valley and Central Okanagan.
- BC's ***Aboriginal population*** will experience growth to 219,400 by 2017, from 193,100 in 2006, or a 13.6 percent increase. The increase will be most pronounced in young people and in the under 30 work force.
- An ageing population will eventually impact ***labour force growth*** negatively, shrinking the number of workers relative to dependants which could decrease both economic growth and tax revenue in the absence of productivity improvements.
- Current and future ***immigrants*** are increasingly from Asia, and the lag time before immigrants have fully integrated into the provincial workforce has increased over the past 20 years. A "go forward" challenge will be ensuring that immigrant economic, education, and social transitions are facilitated as smoothly as possible.

Economy, Innovation and Education

- ***BC's economy*** will likely continue to be strong for the next five years, with real GDP per capita growing above the national average, while the unemployment rate will remain under 5 percent, or basically at full employment.
- ***Beyond 2011***, BC's ***economic performance*** will be shaped by a number of factors including: the extent to which productivity growth occurs; the performance of traditional "price taker" industries in the natural resource sector; and the degree to which the provincial economy diversifies beyond its traditional commodity base.
- ***Border security*** will remain important in the wake of the 9/11 terrorist attacks. This implies that Canada and BC must strive for the most secure entry points possible, while considering further security integration with the United States. At stake is whether Canada and BC are part of a "fortress North America" or whether the United States goes it alone as "fortress America". Significant commercial relations are at stake for BC if security issues are not sufficiently addressed.
- The ***energy sector*** will continue to underpin the BC economy through to 2020, and represents the largest upside opportunity to provide relief to the Central Interior economy in the aftermath of the mountain pine beetle epidemic (post 2012) and associated decline following the harvesting of beetle-kill wood.
- BC faces a very steep challenge with securing ***electricity supply*** over the next couple of decades, demanding new capacity and a sharp focus on conservation. Transmission capacity will also have to be renewed and expanded.
- A growing population and economy will require further strategic improvements in ***transportation*** planning and development throughout the province (air, road, rail, marine), but especially in the Lower Mainland to ease value-destroying bottlenecks, to increase fluidity of supply chains, and to provide increased options for people movement.
- Competitive economies of the next few decades will be underpinned to a considerable extent by ***"City States"*** in many instances. This implies that the Lower Mainland will need to cooperate much more closely to increase regional competitiveness, especially with respect to the critical factors and activities that underpin economic development activities.
- BC's ***productivity*** and ***information and communications technology*** gaps with Canada and the United States should continue to close, but concerted efforts will be required to realize significant gains in this area.
- BC's ***research and development*** spending and "footprint" will continue to increase – albeit modestly – during the decade to come.
- BC's ***education system*** is of high quality, but continues to face challenges on a number of fronts, including: focussing additional efforts on costly – yet critical – early childhood education programs; continuing efforts to improve the high school completion rate from its current level of 79 percent; and furthering efforts to raise the level of adult literacy.
- Further efforts will be required to close ***educational outcome*** gaps between the ***Aboriginal and general population*** on high school completion, among other key measures.

- ***Skilled worker shortages*** will persist well into the next decade as the labour market ages and the baby boom generation reaches retirement age.
- Part and parcel of efforts to build an innovative economy will be whether BC "closes the gap" with other provinces in relation to the number of ***graduate students*** enrolled at post-secondary institutions.

Environment, Health, and Society

- BC will likely continue to be a national leader on comparable measures of ***environmental outcomes***.
- ***Climate change*** is likely to persist as a critical provincial, national and global issue which will result in efforts to reduce greenhouse gas emissions over the short to medium term. It is imperative that British Columbia does so in a measured, balanced and economically sensitive fashion.
- The relative ***scarcity of land*** for commercial and residential development within the Greater Vancouver Regional District will require: increased efforts to build more compact urban forms; greater cooperation in land use and transportation planning among municipalities; and, overall balancing of economic growth and environmental impacts.
- As population growth in urban and regional British Columbia continues, ***water quality and quantity*** will increasingly be an issue. Similar to transportation and energy, questions about water sustainability will give rise to greater use of demand management techniques (i.e. conservation and regulation) to ensure both sufficient quality and quantity. BC must also ready itself for the prospect of the overdue "100 year flood" in the Fraser Valley.
- BC will likely continue to post top ranks in key ***health outcomes*** over the next decade. While not assured, there is no reason to believe there will be a dramatic alteration of BC's leading pattern on key indicators such as life expectancy, cancer mortality, cardiovascular mortality, infant mortality and potential years of life lost.
- ***Health care and costs*** will continue to be critical issues for BC and other provinces in the coming decade. The question of sustainability of the system driven by population ageing, escalating technology costs, together with increased utilization of services underscores the need for prevention, healthy living and other individual efforts to reduce system costs and improve health outcomes. Here, the primary – though not exclusive – focus should be on continuing to reduce the incidence of smoking, overweight, and obesity in the population.
- Further efforts to close gaps between ***Aboriginal and general population health outcomes*** will be required in the decade to come.
- As a small, open, jurisdiction, BC must prepare for and to the greatest extent possible guard against ***pandemic and infectious diseases***. The potential for economic and social disruption is significant, given an increasingly globally oriented economy and society.
- ***Immigration*** – particularly from Asia – will continue to underpin a significant portion of population and labour market growth in the decade to come. A key challenge for BC is to improve the 'earnings gap' of recent immigrants, together with finding ways to ease

transitions into the labour market.

- Current trends indicate that there is room to improve BC's ***volunteer, donation and voter participation*** rates. Democratic participation and an active citizenry are critical precursors for a civil society.
- Though BC's ***crime rates*** have generally been improving, BC's rates continue to be higher in many categories than other provinces. BC's higher use of illicit drugs relative to other provinces and their strong connection to crime and criminality will require concerted effort and attention by government, community interests and individual citizens over the next decade.
- Standard indicators of ***low income incidence*** and poverty suggest that BC's relative position has been improving relative to other provinces, though it remains near the bottom of inter-provincial rankings in most recent available data. Efforts to monitor and address low income incidence and find innovative ways to assist those in strained circumstances must be an ongoing focus of government, community interests, and individual citizens.

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ISSUES AND TRENDS IN BRITISH COLUMBIA

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I. INTRODUCTION

The British Columbia Progress Board, established by Premier Gordon Campbell in July, 2001, is an independent panel of 18 senior business and academic leaders. The Board is tasked with benchmarking British Columbia's economic, innovation, education, environment, health and social performance over time and relative to other jurisdictions. The Board also provides strategic advice on ways to improve provincial performance.

This report is a broad, yet focused, synthesis of major issues and trends facing British Columbia now and over the medium term. The discussion that follows aims to identify how key trends might be expected to impact the measurement areas – economy, innovation, education, environment, health and social performance – the Progress Board relies on to track BC's progress. Within this context, the report provides a snapshot of what British Columbia might look like in the coming decades, and identifies the main hurdles that might affect further progress in British Columbia. In so doing, hopefully policymakers, business and community leaders, and individual British Columbians can prepare for future success, while anticipating and confronting looming challenges.

The report begins in Part II by discussing the main themes likely to impact BC's future. Demographic change will shape several areas of public policy in the coming decades, not least how an ageing population will present new and in some ways profound challenges to our health care system. This section goes on to examine BC's dynamic place as a small, open, economy operating in a global context and how shifting world demand and international trade patterns may impact the composition of our economy and workforce. British Columbia must continue to draw on past resource-based industries as a foundation for future success, while examining where emerging upside opportunities lie beyond resource exports to our vital US market and the emerging economies of the Asia Pacific.

The main body of the report is divided into six sections, Economy, Innovation, Education, Environment, Health and Society, to mirror the measurement silos within the Progress Board's annual benchmarking report. Each of the six sections analyses how BC has been performing on several measures, and provides a glimpse of where BC is headed based on expert opinion, past trends, the best available forecast information and data, along with a further discussion of the cross-cutting themes likely to affect BC's performance as identified in Part II.

Part IX of the report provides some brief concluding commentary on current and future trends along with a summary of some strategic considerations for BC's future.

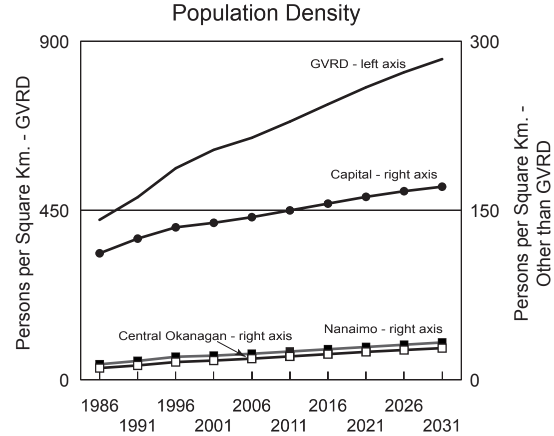
II. DEMOGRAPHICS AND POPULATION – A GROWING, AGEING, AND CHANGING BRITISH COLUMBIA

British Columbians, like populations of most developed economies, are getting older. The median age in BC was 30.4 in 1980, rising to 39.8 in 2006. By 2031 the median age is projected to be 46.2 in British Columbia.[1] This trend is being driven in large measure by the ageing of the baby boomer generation, the population bubble roughly defined by those born in the period directly following World War II, from 1946 to 1964, and by below-replacement birth rates since 1970.[2] The proportion of seniors in the population is predicted to increase significantly in the coming decades, with the 65+ age group estimated to account for 24.2 percent of the population in 2031 compared to just 14.0 percent in 2006. At the same time, the 80+ age group is projected to increase from 3.9 percent of total population in 2006 to 6.6 percent in 2031, the latter reflecting the continuing rise of life expectancy.[3]

BC's population has grown by 11.3 percent in the last 10 years and is projected to increase an additional 29.6 percent over the next 25 years, reaching nearly 5.6 million by 2031.[4] The majority of population growth is expected to come from migration, with international sources estimated to comprise 61 percent, inter-provincial immigration 36 percent, and natural increases 3 percent.[5]

The majority of population growth will be focused in areas that already have high relative density – Greater Vancouver, Victoria, Nanaimo, the Central Okanagan, Fraser Valley, and the Cowichan Valley. A few rural areas will grow slightly more dense in population over the coming decades (for example the Thompson-Nicola and Columbia-Shuswap regional districts); however, most of the sparsely populated areas will remain so looking forward to 2031 (see Figure 1, noting the different scales).

Figure 1: Top Five Regional Districts - Population Density



BC's Aboriginal population will also experience growth, increasing from 193,100 in 2006 to 219,400 by 2017, a 13.6 percent increase. The median age for Aboriginals in BC will increase to 30 by 2017, up from 27.8 in 2006.[6] Because the Aboriginal population has a much younger age distribution than the non-Aboriginal population, the growth in the share of Aboriginals in the general population will be most pronounced in both young people and the under 30 work force.

These demographic trends will have a significant impact on BC's economy and society in the coming decades. An ageing population is predicted to impact labour force growth negatively, shrinking the number of workers relative to dependants, which has the potential to decrease both economic growth rates and government tax revenues in the absence of productivity improvements. Simultaneously, the larger 65+ population is predicted to increase demand for public services such as health care and other social assistance programs.

As immigration increasingly makes up a larger proportion of BC's population growth, its impact on BC's economy and society will be complex. Current and future immigrants are increasingly from Asia, especially China, and the lag time before skilled immigrants are fully employed in BC has increased over the past 20 years, due in part to language and credential recognition barriers. This presents a "go forward" challenge to ensure that immigration transitions are facilitated as smoothly as possible.

Achieving and Maintaining Balance – Economy, Innovation, Education, Environment, Health, and Society

British Columbia is a small economy globally, making up less than one quarter of one percent of total world GDP in 2006.[7] BC also has an open economy, vulnerable to external economic forces as it competes in product, labour, and capital markets.[8] Being a small, open economy means capital and labour move freely in and out of the province with few encumbrances. In order to ensure a strong, productive economy, BC must attract capital and labour to the province by offering high returns to both through a strong fiscal framework that ensures financial incentives to induce investment and reward hard work are present, while at the same time maintaining a sustainable environment, and a healthy and vibrant society. This is no easy task!

Overall, Canada's prominence in the global market is diminishing, as developing nations such as China and India, and increasingly Brazil, Turkey and Russia, acquire a larger share of world GDP and become more integrated into international trade relationships. BC is in a strategic position to gain from the rise of Asian economies, but should also maintain a watchful eye on economies that are emerging apart from those in Asia. The province has appropriately reinvigorated its role as Canada's Asia-Pacific Gateway for trade. At the same time however, the Asia Pacific opportunity is a complement to – not a replacement for – our core trade relationship with the United States. Enhancing both should be a key public policy goal for British Columbia over the medium term.

There are other positive recent developments that will re-shape how British Columbia's economy will function. The conclusion of the BC/Alberta Trade, Investment and Labour Mobility Agreement (TILMA) provides a groundbreaking opportunity for BC. It will create the second largest 'single economy' in Canada, and is a positive step towards the real elimination of inter-provincial barriers to trade by improving the free movement of goods and services, investment and labour across provincial borders. Over time it should serve to promote greater economies of scale in the production and distribution of goods and services, while encouraging other productivity enhancing synergies between the two provinces. The addition of other provinces to TILMA in the next decade would strengthen the effect of the agreement.

The North American Free Trade Agreement (NAFTA) will continue to provide a key platform for trade and international relations for both BC and Canada moving forward. However, pursuing other bi- and multi-lateral trade relationships – including those contemplated in the gateway initiative – will be crucial to BC's future economic success. There remain key risks to enhancing trade relations, however. Figuring prominently among them is the question of border security which emerged as a prominent challenge in the wake of the 9/11 terrorist attacks. For policymakers, having the best security systems possible is an ongoing imperative, not a passing trend. This means effectively balancing increased demands from US authorities for tightened border controls with the potential costs of delays in the movement of goods and services, as well as people across international borders. To underscore the importance of efficient movement, an average of $1.9 billion in goods and more than 300,000 people move across the Canada-U.S. border every day.[9] This may mean that Canada – and by extension British Columbia – should meet US security requirements while working towards greater economic unification, including even more open access to US markets.[10]

Now and in the future, BC needs to balance the pursuit of economic growth with other priorities, including protection of the environment and well-managed use of natural resources, efforts to lower crime rates, and ensuring a responsive, affordable health care system. Building an education system that is suited to the challenges of contemporary British Columbia will also be important. This includes the need to address trades and vocational skill shortages, ensuring that the province nurtures leading research and innovation capacity, meeting English as a second language needs where prevalent, and closing gaps in educational outcomes between the general and Aboriginal populations.

Increasing populations in urban and suburban areas – primarily in Greater Vancouver, Victoria, and other metropolitan areas such as Nanaimo, Abbotsford, and Kelowna – means increasing stress on existing infrastructure and transportation systems, environmental pressures such as water and air quality, and water quantity. This will heighten the need for growth strategies that ensure balance between the infrastructure and development growth required to boost our economic standard of living, and maintaining a sustainable and healthy environment. This must now be accomplished within the reality of climate change which has come to the fore as a dominant public policy issue. In this regard, policymakers and British Columbians will be required to undertake an "artful balance" to ensure that economic growth is not undermined, while doing our part to address climate change. This will not be an easy task.

Maintaining and enhancing British Columbia's social fabric is also an important part of achieving balance within the province moving forward. British Columbia faces challenges on a number of social fronts, including tackling crime and addiction, integrating immigrant populations required to meet BC's labour market needs, improving democratic participation, improving accessibility and inclusion for persons with disabilities, and tackling poverty where it is apparent.

III. ECONOMY – ISSUES AND TRENDS

Current Prospects, Future Potential - Economic Performance Snapshot

One of the most common measures of economic success and improving standards of living is GDP per capita. BC's level of real GDP per capita in 2006 was $34,971, about $1,500 below the Canadian average of $36,463, marking a significant improvement in BC's economic performance over the past few years. In 2006, BC experienced GDP per capita growth of 2.3 percent, ranking fifth among the provinces.[11] As well, forecasts for the next few years are resoundingly positive, with cautious Ministry of Finance forecasts placing real GDP growth above 3.0 percent for 2007 through to 2011, and the unemployment rate below 5 percent for the same period (see Table 1 below). A range of other forecasts is found in Table 2.

It is likely that British Columbia will experience strong economic growth over the next 5 years from 2007 to 2011. Some forecasts suggest – led by strong investment and consumer spending – real GDP will grow by 21.0 percent altogether throughout the forecast period, or by an average of 4 percent per year.[12] On a per capita basis, leading estimates suggest growth of 2 percent per year on average to 2010, while unemployment should continue to be about 4.8 percent and personal disposable income increases of 2.3 percent a year from 2006 to 2010.[13]

Table 1: Ministry of Finance Key Economic Indicators Forecast

		Forecast				
	2006	2007	2008	2009	2010	2011
British Columbia Economic Indicators	Percent change unless otherwise noted					
Real GDP	3.9[e]	3.1	3.0	3.1	3.3	3.0
Employment	3.1	1.9	1.9	1.9	2.0	2.0
Unemployment rate (percent)	4.8	4.8	4.8	4.8	4.8	4.8

Notes: e=Ministry of Finance estimate

Source: BC Government, Budget and Fiscal Plan, 2007/08 - 2009/10, Table 3.7

BC's future economic performance will be shaped by many factors, but some of the most important – and interrelated factors – include: the extent to which productivity is improved and productivity growth is achieved; infrastructure and transportation development; the performance of traditional "price taker" industries including energy, forestry, mining, and tourism which are affected by the level of the dollar, marketing efforts and transportation connectivity and costs; the identification and nurturing of emerging industries beyond traditional land and resource based industries to diversify BC's export base; and, BC's general efforts to build new trade and investment opportunities, while enhancing provincial competitiveness. To begin with, we examine productivity, an important antidote to demographic change and population ageing.

Productivity

Productivity growth is the only long-run way to achieve sustained growth in per capita incomes in a developed economy. As the size of BC's labour force declines relative to total population due to ageing, productivity growth will become even more important in ensuring a strong, growing provincial economy and rising standards of living.

Table 2: Key Economic Indicators, Various Sources						
Real GDP Growth, percent	2006	2007	2008	2009	2010	2011
BC Ministry of Finance (Feb. 20, 2007)	3.9e	3.1	3.0	3.1	3.3	3.0
Credit Union Central of BC (V. 27, April 2007)	4.0	3.5	3.9	4.1	4.7	3.6
TD Economics (May 7, 2007)	3.6	3.0	3.3			
Scotia Economics (June 4, 2007)	3.6	3.2	3.4			
CIBC World Markets (Oct. 31, 2006)	4.5	3.6				
Bank of Montreal Capital Markets (Dec. 6, 2006)	4.4	3.6	3.7			
RBC (March 2007)	4.7	3.4	3.4			
Conference Board of Canada (April 20, 2007)	3.7	3.1	3.3			
Employment Growth, percent	2006	2007	2008	2009	2010	2011
BC Ministry of Finance (Feb. 20, 2007)	3.1	1.9	1.9	1.9	2.0	2.0
Credit Union Central of BC (V. 27, April 2007)	3.0	3.1	2.8	2.8	2.9	1.7
TD Economics (May 7, 2007)	3.1	2.7	2.6			
Scotia Economics (June 4, 2007)	3.1	3.0	2.0			
CIBC World Markets (Oct. 31, 2006)	2.9	2.0				
Bank of Montreal Capital Markets (Dec. 6, 2006)	3.0	1.7	1.3			
RBC (March 2007)	3.1	3.0	2.0			
Conference Board of Canada (April 20, 2007)	3.1	3.0	1.3			
Unemployment Rate, percent	2006	2007	2008	2009	2010	2011
BC Ministry of Finance (Feb. 20, 2007)	4.8	4.8	4.8	4.8	4.8	4.8
Credit Union Central of BC (V. 27, April 2007)	4.8	4.4	4.1	3.8	3.6	4.0
TD Economics (May 7, 2007)	4.8	4.3	4.5			
Scotia Economics (June 4, 2007)	4.8	4.3	4.2			
CIBC World Markets (Oct. 31, 2006)	4.7	4.6				
Bank of Montreal Capital Markets (Dec. 6, 2006)	4.7	4.7	4.8			
RBC (March 2007)	4.8	4.9	5.1			
Conference Board of Canada (April 20, 2007)	4.8	4.1	3.8			
Note: Sources are listed in the References section						

In 2006, labour productivity (or real GDP per hour worked in the business sector) in BC was $31.48, or fifth in Canada. Ontario ranked first with real GDP per hour worked of $35.72. In terms of progress between 1997 and 2006, BC ranked ninth with an 11.2 percent increase, while Newfoundland and Labrador (46.8%) and Manitoba (22.5%) saw the largest productivity growth among the provinces.[14] Weak productivity growth was the primary reason for BC's trailing prosperity relative to other provinces over the period 1981-2004.[15] In the short run, BC will likely continue to play catch-up despite otherwise strong economic performance moving forward to 2010.[16]

At the same time as BC underperforms inter-provincially and against the Canadian average, Canada also lags behind many competitor nations. The Organization for Economic Co-operation and Development (OECD) suggests that improving productivity growth will be a key challenge for Canada in the coming years, and that a number of factors contribute to recent underperformance, including: specialization in low-productivity sectors; residual adjustments to large global shocks; low ICT investment per worker; a high proportion of small firms (98% with less than 100 employees); and, a large percentage of the workforce (40%) with low literacy rates.[17] The importance of investment in general is highlighted by a finding in a recent Statistics Canada report that increases in capital intensity were responsible for roughly 55 percent of Canada's labour productivity growth between 1961 and 2005.[18]

Recent increases in capital spending should help BC improve its productivity performance in the coming years. Non-residential investment spending on machinery and equipment, buildings, and infrastructure by business and governments is forecast to expand by 36 percent in the period 2007-2011, compared to 20 percent in the previous five-year period. Business investment in machinery and equipment is expected to increase by 8.6 percent annually, while investment in buildings and related infrastructure is estimated to increase 6.3 percent annually.[19] Reasonable performance in the forestry sector, the renaissance in mining, and continued growth in the upstream oil and gas sector will be important to improving aggregate productivity in the province moving forward. However, any balanced assessment of the BC economy – particularly with respect to the resource sector – must be mindful of the cyclical and "price taker" nature, and recent national and provincial commitments to address climate change as a priority. The latter item is discussed in greater detail later in this report.

Infrastructure and Transportation

Estimates of total infrastructure debt, the amount of spending increase needed in order to bring Canada's infrastructure up to acceptable levels, range from $60 billion in 2002[20] to as high as $125 billion,[21] and some predict it could increase to $400 billion by 2015.[22] Sufficient and appropriate infrastructure – utilities, education and health systems, public and social services, and communication systems – and transportation systems provide the necessary foundation for a healthy, functioning economy.

A recent 5-year forecast for BC suggests that public spending on buildings, equipment, and infrastructure will expand by 25 percent in the period 2006-2010 with the bulk of this investment to be allocated towards transportation projects and the 2010 Olympics.[23] Included within the expenditure is $600 million for the Olympics; $1.8 billion for the RAV line; $800 million for the Convention & Exhibition Centre in Vancouver; a new container port in Prince Rupert; and, $3 billion in other transportation network improvements throughout the province.[24]

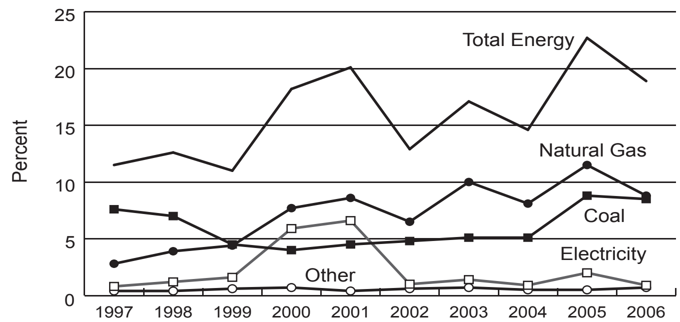
Importantly, the provincial government's recent announcement of a new governance structure, an expanded service base, and a new funding model for Translink will shape the future of transportation in the Lower Mainland. This is a positive step towards regional transportation planning and service delivery across municipalities, and is critical for realizing the "gateway" potential of BC. It is also critically important for efforts to continue to build a vibrant economy in the Lower Mainland, where over half of the province's people now reside. From a supply chain management perspective, the success of programs and policies under the new Translink entity will also be critical to the economies of the BC Interior and Western Canada.

Selected Sector Review

Energy

Capital spending in the oil and gas industry increased from $1 to $1.5 billion per year in the late-1990s to more than $4.5 billion in 2004, and the number of wells drilled increased substantially to 1,416 in 2006.[25] In 2006, energy represented 18.9 percent of BC's international exports, up from 11.6 percent in 1996. Much of this jump was due to increases in natural gas exports from 2.8 percent to 8.8 percent of all international exports (see Figure 2). In 2005/06 natural gas revenue to the province was $1.9 billion representing 5.4 percent of provincial revenue for that year. Oil and gas prices will remain favourable in the short-term, allowing BC's natural gas industry to continue to grow, particularly in the Northeast.[26] In the longer term, energy prices are expected to continue to rise due to a predicted increase in global demand of 60 percent over the next two decades.[27]

Figure 2: Energy Exports as a Percent of BC's Total International Exports



Source: BC Stats

The medium term outlook for the forest industry – discussed elsewhere in this section – raises important economic development questions for the province. With the coastal industry in a state of decline, and the interior likely to face similar prospects in the next decade, all orders of government and community interests must accelerate efforts to lay the foundation for a new economic base now. One potent opportunity is the development of on- and off-shore

Table 3: 2004 Total Electricity Production by Source

	Other Renewables	Hydro Electric	Nuclear	Waste and Biomass	Natural Gas	Diesal Oil	Coal
British Columbia	0.0	92.8	0.0	1.0	6.0	0.2	0.0
Alberta	2.3	4.4	0.0	0.0	12.0	2.6	78.7
Australia	0.3	6.9	0.0	0.6	12.3	0.7	79.2
California	10.7	17.0	14.5	0.0	37.7	0.0	20.1
Denmark	16.3	0.1	0.0	8.8	24.7	4.0	46.1
Finland	0.4	17.6	26.5	12.4	14.9	0.7	27.5
France	0.2	11.3	78.3	1.0	3.2	1.0	5.0
Germany	4.2	4.5	27.1	2.6	10.0	1.6	50.0
Japan	0.4	9.5	26.1	1.9	22.6	12.3	27.2
Norway	0.3	98.8	0.0	0.5	0.3	0.0	0.1
Ontario	1.8	24.8	49.7	0.0	5.2	0.5	18.0
Oregon	2.3	64.4	0.0	0.0	26.3	0.1	6.9
Quebec	0.7	94.5	3.2	0.0	0.1	1.5	0.0
United Kingdom	0.5	1.9	20.2	2.1	40.3	1.2	33.8
Washington	2.3	70.0	8.8	0.0	8.6	0.1	10.2

Source: Government of BC, The BC Energy Plan: A Vision for Clean Energy Leadership oil and gas resources. The recent energy plan commits to enhance the scientific knowledge of reserves within the Nechako basin and to begin efforts to engage First Nations.

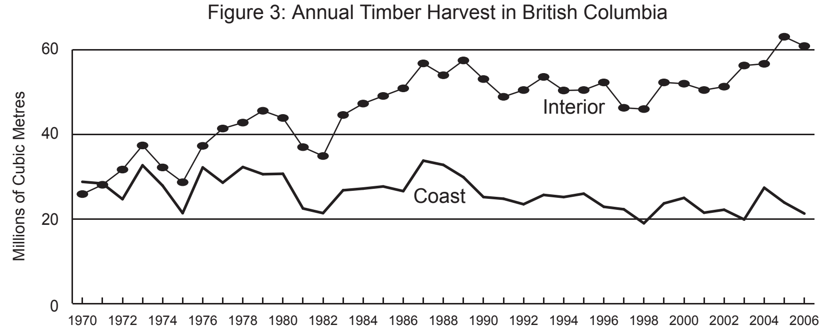
An important issue since 2000 is that BC has become a net importer of electricity; approximately 12-15 percent of current consumption is imported. Looking forward, the province has many options to increase supply and once again become self-sufficient in electricity, including: conventional and small-scale hydro, natural gas, bio-mass, and tidal and wind power. Maximum use of demand side management tools – including the use of "price signals" – and other conservation tools will be critical in BC's efforts to decrease imports and to meet government's aggressive climate change targets. Indeed, the energy plan's recent commitment to source 50 percent of new supply from demand management efforts will require consumers to dramatically change consumption behaviour. Concurrent with the demand for new power is the reality that BC's ageing electricity transmission infrastructure will also require significant improvements and upgrades.

Forestry

The relative importance of forestry and logging as an industry in BC has been in decline. In 2006, there were 21,700 people working in forestry (1 percent of BC's workforce), down 32.6 percent from 32,200 workers in 1997. Wood product exports have fallen from 36.6 percent of BC's international exports in 1997 to 26.4 percent in 2006.[28] The forest industry's share of total BC GDP has fallen from 4 percent to 3 percent since the beginning of the 1990s; however, the industry made a slight recovery in 2004 and in 2005.[29]

The industry has been challenged by loss of market share in Japan to European competitors and the Softwood Lumber Dispute which wreaked a heavy toll on BC's forest industry, especially on the ***coast***. In this connection, revenue fell 24 percent from $2.5 billion in 2000 to $1.9 billion in 2004. In line with high production costs and low profitability, investment has tapered off resulting in capital and machinery that is old and unproductive. In contrast, the ***interior*** has invested, improved productivity, and shown the business model flexibility needed to maintain their share of the critical US-market despite persistent US trade actions designed to limit exports. Consequently, revenues in the Interior have grown 28 percent from $4.3 billion in 2000 to $5.5 billion in 2004.[30] Figure 3 provides a comparison of the increasingly divergent output of the two segments of the industry – coast and interior – between 1970 and 2006.

Figure 3: Annual Timber Harvest in British Columbia



Sources: Ministry of Forests and Range

Three major trends will likely affect the forest industry as a whole in British Columbia in the coming decade. First, on the supply side, the ***mountain pine beetle*** infestation in the interior will boost volume and output in the short-term as infested trees are harvested before they lose their commercial value. Perversely, there are short-term upside economic benefits to be captured by harvesting beetle infested wood for conventional market uses and unconventional uses such as bio-fuels. This will be followed by a significant decrease in medium term harvest levels once the infested forest has been logged. Box 1 below provides some further background on this critical issue.

Box 1: Mountain Pine Beetle Epidemic –
BC's Major Medium Term Economic and Ecological Challenge

The current mountain pine beetle epidemic, centred on BC's Central Interior, is the largest in recorded history. By the end of 2005, it covered an estimated 10 million hectares, or 11% of the total land area of BC. Mountain pine beetles are endemic to BC's lodge pole pine, and there have been several epidemics throughout BC's history. The epidemic has reached the current size for two reasons: an abundance of lodge pole pine (covering 30% more area in 2000 than 1910) due in part to improved forest fire fighting practices, and a lack of cold temperatures (-40°C in winter or -25°C in early fall or late spring) that are necessary to kill a sufficient amount of beetles.

Controlling the infestation is no longer a possibility. Measures need to be focused on: tapping all possible economic value from beetle killed trees, reforestation that encourages ecological diversity and promotes the growth of trees that can be harvested soon after the beetle epidemic runs its course, and encouraging economic diversification in communities most affected by the epidemic.

Increased Annual Allowable Cuts in the affected Timber Supply Areas will create a short-term economic boom. However, this boom will be followed by an economic, employment and ecological bust if all interests don't work together to find new uses for beetle-stained wood in the short-term, and promote economic and ecological diversification in the medium-term. Government, business and community interests must continue to seriously plan for the advent of the post "pine beetle" economy, especially in the Central Interior of the province.

On the demand side, both ***US and domestic housing starts*** are declining, depressing lumber prices. Housing starts in Canada are forecast to decline by 7.9 percent in 2007 and 6.7 percent in 2008, while south of the border US housing starts decreased in 2006 and are expected to fall by roughly 17.0 percent in 2007.[31] The ***softwood lumber trade issues*** – though resolved last year – will continue to loom large between Canada and the US over the long term. Under the managed trade arrangements implicit in the agreement, the spectre of further disputes between the two countries is merely forestalled for a period of time, not entirely eradicated (see Box 2 below).[32]

Resolution of the long standing softwood lumber dispute will doubtless stabilize the industry in the short term, but history reminds that the softwood lumber trade is a perennial issue of contention in Canada-US trade relations. It is expected that employment in forestry and logging will grow at about the same rate as the rest of the economy in the coming decade. However, the industry's share of total GDP is expected to drop from 3 percent in 2006 to 2 percent by 2015,[33] in no small part due to the fallout from the mountain pine beetle epidemic.

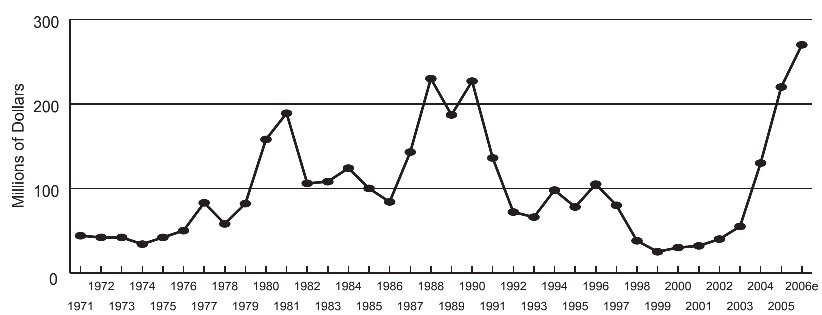
Box 2:
The Latest Canada-US Softwood Lumber Agreement

In August 2006, BC agreed to support a revised Canada-US Softwood Lumber Agreement. The agreement includes the return of $4.4 billion of the $5.4 billion of duties paid to the US by Canadian softwood suppliers since the expiry of the last agreement in 2001 and replaces the duty with an export tax and voluntary export restraint effective November 1, 2006 to be collected by the Canadian government. This agreement means that when prices drop below a set minimum of $355 per thousand board feet, there will be either: Option A, an export tax of 5, 10 or 15% (increasing as the price of lumber decreases) or Option B, a combination of lower sliding export taxes and export restraints. The monetary benefits of this trade restriction now stay in Canada, as opposed to the pre-agreement duties which were collected in the US.[34] The agreement also prohibits any trade action by the US for its duration, and is set to remain in effect for seven years (with a six-month termination clause and subsequent one year standstill period of effective free trade). Settling disagreements with the US on softwood lumber is of primary importance in BC, the source of more than 50% of all Canadian softwood lumber exports to the US in 2004 and 2005 (in terms of both volume and value). Softwood lumber exports from BC to the US were valued at $4.21 billion in 2004 and $4.25 billion in 2006.[35] The agreement has both costs and benefits. Costs include the $1 billion in duties that will remain in the US, as well as limitations on production and profitability that come with restrictive quotas and export taxes. The main benefit is stable trade relations with the US, including the end of costly litigation proceedings and guaranteed access to BC's largest market for its biggest export – at least for the short term, and until "next time".

Mining

The BC mining industry – considered all but moribund just a few years ago – has experienced a renaissance in the past couple of years. One leading indication is the aggregate level of provincial exploration expenditures which have returned to levels not seen in about 15 years. In 2005, for example, exploration expenditures were $270 million, up 22.7 percent from 2005 and double the 2004 value (see Figure 4).[36]

Figure 4: Mineral Exploration Expenditures in British Columbia



Sources: Ministry of Energy, Mines and Petroleum Resources

The mining, oil and gas extraction industry's share of total GDP is a lot higher than its share of employment, with a labour productivity advantage that is well above the provincial average. Employment in mining was 8,200 in 2006. GDP growth in the industry outpaced the rest of the economy in recent years, but is expected to slow somewhat moving forward. The mining and oil and gas extraction sector is forecast to generate about 2 percent of the province's GDP by 2014, down from its present level of 3 percent.[37] Despite predictions that mining will generate a smaller proportion of GDP in the future, there are a number of opportunities that are at various stages of regulatory review as outlined in Box 3. Many of these are prime opportunities to shore up rural economies, provided that commodity prices remain buoyant as many forecasts expect them to be during the next number of years.

Box 3: What is "Old" is "New" Again: Existing and Potential Metal Mining Opportunities

The return of commodity prices to levels previous seen – and in some cases higher than in the 1970's – opens up the opportunity for metal mining to play a much bigger role in the provincial economy, one which is more in line with the industry's historic contribution. Mineral exploration and development technology has advanced considerably in recent years. The 'footprint' of mining activities is also small relative to the value that output provides to the provincial treasury, personal incomes and the variety of activities that trace their livelihood to the industry. Importantly, many potential metal mines are located in areas of BC where First Nations are logical partners and direct beneficiaries. Below is a list of current operating mines, those recently permitted or approved, and others at various stages of application and/or review. It is interesting to note there are nine operating metal mines in BC today, compared with about 30 just twenty years ago. From the list, it is clear that there is enormous potential for new economic and social benefits from this so-called "old" economy sector.

Current Operating Metal Mines include: Endako; Eskay Creek; Gibraltar; Highland Valley Copper; Huckleberry; Kemess South; Mount Polley; Myra Falls; Table Mountain.

Environmental Assessment Certificates (but not Mines Act permits): Red Chris; Galore Creek; and, Tulsequah.

Environmental Assessment Process (various stages of pre-application and application review): Cariboo Gold; Cogburn Magnesium; Davidson; Hermann; Highland Valley Copper Landfill; Highland Valley Copper Refinery; Kemess North; Kutcho Creek; Morrison Copper-Gold; Mount Milligan; Prosperity Gold-Copper; Ruby Creek Molybdenum; Shaft Creek; Sechelt Carbonate; and, Sustut Copper.

Mines Act Permitting Review: Galore Creek; New Afton; and, Sandhill Kitimat along with three mines that were recently approved for expansions: Huckleberry; Quinsam; and, Trend.

Source: Ministry of Energy, Mines and Petroleum Resources.

Tourism

Tourism is not an "industry" *per se*, but an amalgam of a variety of activities within the service sector, including: accommodation services; food and beverage services; transportation & warehousing; retail trade; finance, insurance, real estate and leasing; and, elements of various other service industries with a tourist-oriented component (e.g. museums, zoos, gardens, ski hills, golf courses and other similar venues).[38] Employment in the tourism sector has not increased quite as fast as the rest of the economy, and the sector's share of BC employment dropped from 6.0 percent to 5.6 percent between 1997 and 2005. Although Tourism's share of provincial GDP remained steady at about 4.1 percent between 1997 and 2002, it fell to 3.7 in 2005.

The tourism sector has faced a number of challenges which contributed to slower growth in recent years, including: the North American economic slowdown that occurred in 2000 and 2001; the terrorist attacks of 9/11; the SARS outbreak in early 2003; and, the rising value of the Canadian dollar relative to the US (from $0.65 in early 2003 to $0.90 in 2006).[39] While tourism in BC faced a slump earlier in the decade, the sector rebounded in 2004 and continued to expand in 2005. Room revenues in 2005 were $1.7 billion, the highest since 1995, led by the Northeast which had growth of 21.9 percent in 2005, 12.2 percent in 2004 and 22.1

percent in 2003. And while same day travel from the US has yet to recover from the post-9/11 drop, overnight travel rebounded within months. Tightened border security and resulting longer line-ups are largely attributable to limited same day travel.[40]

Tourism is an important sector for British Columbia and will continue to be in the future. However, like many other industries, tourism activity is susceptible to changes in the economic climate both within and outside British Columbia. Looking forward, the 2010 Olympic Games will provide a boost to the tourism sector, along with possible residual benefits due to heightened international exposure.[41] Whether this boost is of temporary or lasting effect will depend on how the tourism sector performs prior to and during the games. Lasting economic impacts from the games for the tourism industry will also be a function of how well the marketing opportunity presented by this "extended intensive television commercial" is leveraged.

Part and parcel of further efforts to advance tourism in the coming years are a number of transportation related issues. For example, achieving approved destination status, further air bi-laterals, along with keeping pace with required urban and regional airport upgrades, will be critical in efforts to grow the industry. All orders of government have done a commendable job of improving BC's network of airports in recent years. Efforts should also be taken in a similar vein to continue to expand provincial road networks. Here, the Progress Board has suggested in previous work that government benchmark the provincial highway network with leading systems elsewhere (e.g. the US inter-state highway system). Within key urban nodes, efforts to remove bottlenecks must continue in order to improve productivity in all industries, while enhancing "tourism experiences".

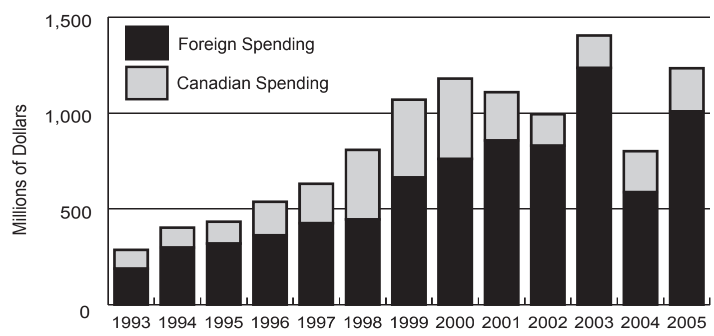
Emerging Industries

British Columbia's economy continues to be underpinned by our traditional resource industries. An important consideration – and one which continues to prove challenging for British Columbia – is to diversify the provincial economic base beyond natural resources. One place to look is high growth industries. Many in BC are either in *support services* or in the *high-tech sector*. The computer & electronic manufacturing industry has seen a large increase in output, to more than eight-and-a-half times 1990 levels by 2005. As well, miscellaneous manufacturing, leather and allied products, food and beverage manufacturing, and motion picture and sound recording industries have all seen GDP more than triple since 1990.[42]

Business services have also increased employment to more than five times 1990 levels. Computer systems design, management, scientific and technical services management of enterprises, security services, motion picture and sound recording, travelling services, rental and leasing, and warehousing and storage have also seen exceptionally strong growth. Indeed, employment in each of these industries has more than doubled since 1990.

Other industries are projected to have above average growth. *Film and TV Production* made a significant rebound in 2005, growing from $801 million in 2004 to $1.2 billion (see Figure 5). Growth in that industry is projected to remain strong at 5 percent per year. The industry's growth since 1993 is depicted in Figure 5, and is broken down into production dollars, Canadian investment and foreign investment.

Figure 5: Value of Film and TV Production in BC



Source: BC Film Commission

Construction is also predicted to grow in the short-term, with GDP increasing at 5 percent per year through to 2011, driven by growth in non-residential construction due to the Olympics, the provincial Gateway program, and other infrastructure expenditures as noted previously.[43]

<u>Box 4:</u> Top BC Non-Resource Export Opportunities - What Does the Data Say?

Among BC's top 25 export industries identified in the North American Industrial Classification System (NAICS) in 2006, seven are manufacturing activities not directly related to resource activities. These industries account for 2.2 percent of 1992 exports and 5.3 percent of 2006 exports. The industries identified as non-resource are listed below:

Other Industrial Machinery Manufacturing: manufacturing industrial machinery.

Semiconductor and Other Electronic Component Manufacturing: manufacturing of semiconductors and other electronic components. Activities involving printed circuit boards undertaken in this industry include: the production of the laminate material; the manufacture of the bare (rigid or flexible) printed circuit boards without mounted electronic components; and the loading of electronic components onto the boards.

Navigational, Measuring, Medical and Control Instruments Manufacturing: manufacturing of navigational, measuring, medical and controlling devices.

Other Plastic Product Manufacturing: manufacturing of plastic products.

Other Basic Inorganic Chemical Manufacturing: manufacturing of basic inorganic chemicals.

Trade and Competitiveness

BC's total exports of goods and services per capita increased from $12,585 in 1997 to $16,028 in 2006 or by 2.7 percent per year on average, the third lowest in Canada. In absolute terms, BC's goods and service exports per capita currently rank eighth out of the 10 provinces. In comparison, neighbouring Alberta fared worse than BC during the same timeframe at 1.8 percent, though their actual exports per capita level of $25,413 is dramatically higher than BC's level.[44]

British Columbia is much more strongly linked to the Asia-Pacific than the rest of Canada is. In 2006, exports to Asia accounted for 6.6 percent of the Canadian total and imports accounted for 18.2 percent. In contrast, BC's exports and imports to the region accounted for

27.4 percent and 46.6 percent, respectively. However, the US is still British Columbia's dominant export market accounting for 61 percent of exports in 2006.[45] Trade remains a weak sector due to a variety of factors, and inflation-adjusted exports are expected to grow at less than 4.0 percent per year.[46]

One idea for improving economic diversification and export performance in British Columbia is to focus on the idea of Greater Vancouver as a "City State". This does not necessarily mean amalgamation of municipalities. It does however imply that considerably more can and should be done to coordinate economic development efforts between and among municipalities within the Greater Vancouver Regional District so that the region can take full advantage of existing and prospective trade opportunities with our core US market and emerging opportunities in the Asia Pacific. Box 5 provides further elaboration this notion.

Box 5: Greater Vancouver as "City State"?
The Need for Coherent Economic Development Planning in the GVRD

Greater Vancouver Regional District (GVRD) municipalities have a number of challenges. Some are transportation related. Others relate to the lack of integrated economic development planning for the region, a haphazard approach to land use planning given the "finite" nature of available industrial and commercial land stock in the region, the lack of alignment between region-wide land use planning and transportation planning, regional branding, and a host of other challenges resulting from 22 different municipal governments not coordinating their economic development efforts enough. Moving forward, the region will have to work more cohesively if it is to attain the characteristics and flexibility that other "City State regions" in the Asia Pacific exhibit. At a minimum, this implies local governments working to harmonize business licensing and zoning arrangements, deciding "who does what and where" in terms of industrial and commercial land use, and truly embarking on a region-wide economic development and planning strategy, given the proliferation of economic development offices between and among municipalities. The recently announced change to Translink governance, planning and operating functions are consistent with a more "integrated" vision of Greater Vancouver and marks a significant step towards a cooperative model of the region as a "City State". The provincial government has a leadership role in making this happen in economic development as well.

While further integration and harmonization is required in our largest urban region, there are some very promising developments in relation to internal trade in Canada, particularly between British Columbia and Alberta. The new BC/Alberta Trade, Investment and Labour Mobility Agreement aims to dismantle non tariff barriers between BC and Alberta, and over time will boost employment creation and productivity in both provinces (see Box 6).

A number of trends in the global economy will affect trade in Canada and BC in the coming decades. While Canada has performed quite well under free trade, it has generally been with developed nations, particularly the United States.[47] The rise of the BRIC countries (Brazil, Russia, India, and China), has caused Canada's share of the global economy to shrink (9th overall as measured in nominal GDP and 11th overall as measured using PPP conversion rates). On an international level, the share of world GDP of the "North" is decreasing and that of the "South" increasing.[48]

Box 6:
The BC/Alberta Trade, Investment and Labour Mobility Agreement

On April 28, 2006 Alberta and British Columbia signed a Trade, Investment and Labour Mobility Agreement (TILMA), aiming to eliminate all barriers to trade, investment, and labour mobility between the two provinces.[49] The agreement is a response to persistent inter-provincial barriers in the form of overlapping regulations and policy misalignment and a desire to further integrate the two increasingly interrelated economies. It began in April 2007 and the transition period will end April 2009.[50] While the Canadian Constitution expressly prohibits tariffs on inter-provincial trade in Canada, non-tariff barriers constrain the integration of the Canadian market by increasing the cost of doing business across provinces. The agreement creates a single economy of 7.5 million people, the second largest in Canada.[51]

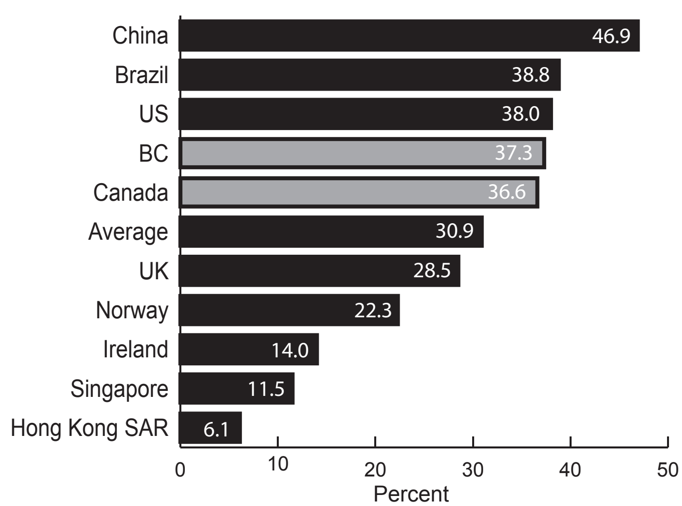
The key terms of TILMA include: 1) Identification and reconciliation of differences in standards and regulations that function to restrict trade, investment and labour mobility; 2) Streamlining of business registration and reporting requirements such that businesses registered in one province are automatically registered in the other; 3) Workers certified for an occupation by a regulatory body in one province can qualify to practice in the other. They may still be required to register or obtain a licence with the other province or one of its regulatory bodies, but no additional training or examination will be required; 4) Both provinces will provide an open and non-discriminatory tender process to procurement from their governments; and, 5) Improvement of existing inter-jurisdictional trade arrangements in energy, while ensuring standards are compatible within the region and North America. No additional registration requirements will be needed for commercial vehicles to operate in both provinces.

TILMA also includes a framework for a dispute resolution process in which an arbitration panel can be established to review the dispute if required and a binding report will be issued. Non-compliance can result in a penalty of up to $5 million.[52] At the end of the implementation process in April 2009, further negotiations are planned to extend the scope of TILMA to cover municipalities, school boards, publicly-funded academic, health, and social entities, financial institutions, financial services, and Crown corporations. Expansion to other provinces is also a future goal.[53]

Taxes

Canada has the sixth highest ***effective tax rate on capital*** among 36 industrialized and leading developing countries in 2006 at 36.6 percent. Among this group of countries only China, Brazil, Germany, Russia and the United States have higher rates (see Figure 6). Among the full set of eighty-one countries, Canada is eighth highest with an effective tax rate on capital which is nearly six percentage points higher than the size-weighted average of 30.9 percent. Within Canada, British Columbia's

Figure 6: Effective Tax Rates on Capital, 2006



Source: CD Howe Institute, The 2006 Tax Competitiveness Report: Proposals for Pro-Growth Tax Reform, September 2006.

effective tax rate on capital is the fourth highest at 37.3 percent, almost twice Newfoundland and Labrador's rate of 19.2 percent. Alberta's rate is 8.3 percentage points lower than BC's, at 29.0 percent.[54]

The current tax system in Canada also discriminates between sectors. Construction, communications, wholesale and retail trade, and household and business services are taxed highly – large corporations in these sectors pay rates around 40 percent – while primary forestry, manufacturing and public utilities pay much lower rates. Property taxation and the spread between commercial/industrial and residential rates can have important implications for business investment and location decisions. This is particularly – but not exclusively – the case in many one industry towns in BC's regions. Careful assessment of appropriate levels and spreads between various property tax categories should be an ongoing item for review by provincial and local authorities. Last year, the BC Competition Council recommended that the provincial corporate income tax be reformed to broaden the base, to establish a lower rate without industry-specific exemptions and credits, and to hold the gap to within 125 percent of Alberta's rate to avoid discouraging businesses from locating in BC. Maintaining a watchful eye on Alberta's taxation levels will be critical to BC competitiveness over the next decade.

On the ***personal tax*** side, high marginal personal tax rates – the amount taxed on the last dollar earned – discourage employees from working more and provide little incentive for those in the non-market economy to seek market work. Spikes or plateaus in the personal marginal effective tax rate are caused by claw-backs of tax credits and income tested government services, which can mean marginal effective tax rates of 60 percent at some levels (for every new dollar earned, 60 cents is clawed back either in taxes or in services).[55] Depending on the person, the spikes and plateaus hit at different income amounts in Canada; for a family with two children, the provincial average effective marginal tax rate peaks at more than 60 percent at an income of $25,000 to $35,000, for a senior with interest income, the marginal rate spikes to almost 80 percent at an income level slightly less than $25,000.[56] As outlined in Table 4, among the provinces, BC had the 2nd lowest top marginal personal income tax rate as of 2006 at 43.7 percent, behind Alberta's 39.0 percent. With the 10 percent tax cut announced in February's provincial budget, BC will have the lowest personal income tax burden in Canada for individuals up to roughly $108,000 in income.[57] In the coming decade, it will be critical that BC maintains competitive personal income tax levels given intensifying competition for skilled workers in North America and the ever increasing knowledge component required in most paid employment.

Table 4: Combined Federal and Provincial Tax Rates 2006

	Top Marginal Rates (%)			Ranks for Top Marginal Rates		
	Salary & Interest	Capital Gains	Non-eligible Dividends	Salary & Interest	Capital Gains	Dividends
Federal	29.00	14.50	19.58	n/a	n/a	n/a
BC	43.70	21.85	31.58	2	2	4
AB	39.00	19.50	24.08	1	1	1
SK	44.00	22.00	28.33	3	3	2
MB	46.40	23.20	35.24	4	4	7
ON	46.41	23.20	31.33	5	4	3
QC	48.22	24.11	36.35	8	8	8
NB	46.84	23.42	37.26	6	6	9
NS	48.25	24.13	33.06	9	9	6
PE	47.37	23.69	31.96	7	7	5
NF	48.64	24.32	37.32	10	10	10

Source: KPMG

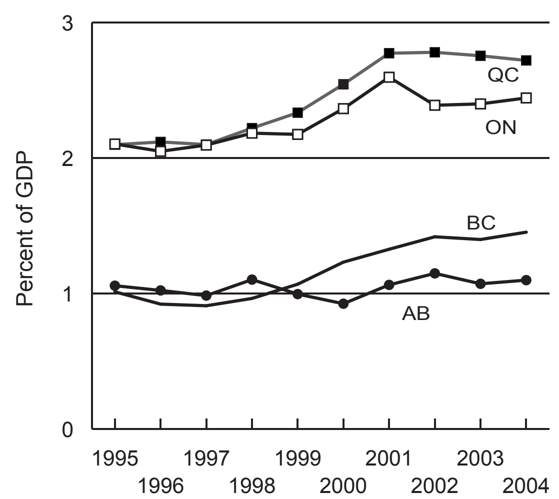
IV. INNOVATION – ISSUES AND TRENDS

A considerable amount of research on economic growth and differences in living standards (GDP per capita) among developed countries focuses on research and development (R&D) intensity, often measured as spending on R&D as a percent of total GDP. Because of the wide variation in R&D expenditures and its empirically demonstrated positive relationship to productivity growth, increasing comparative levels of R&D and ensuring commercialization of R&D-generated ideas is viewed as a primary method of stimulating sustained economic growth in developed economies like British Columbia and Canada. The following discussion focuses to a large degree on Canadian data which is more detailed than available data for BC on innovation. British Columbia's performance mirrors that of Canada in many material respects.

R&D Expenditures

In 2004, R&D spending as a percent of GDP in BC was 1.45 percent, ranking fourth in Canada, while Quebec (2.74%) and Ontario (2.36%) were the top two provinces. BC spent $2.3 billion compared to spending levels of $12.6 billion on R&D in Ontario, $7.2 billion in Quebec, and $2.0 billion in Alberta. The gap in R&D spending between BC and the national average has decreased from 40.4 percent in 1995 to 21.8 percent in 2003. Canadian provinces overall spend about half as much on R&D as a percent of GDP as peer US states, including Washington (4.7%) and California (4.1%) and far less than the top spenders like New Mexico (8.7%), and Massachusetts (5.3%).[58]

Figure 7: Provincial R&D Spending



Canada's gross expenditures on R&D (GERD) in 2004 was 1.99 percent of GDP, placing it in the middle of OECD countries, but well behind many highly developed nations such the US which had a GERD ratio of 2.68 in 2001 and behind Sweden, Finland, Japan, Switzerland, Iceland, Korea, the US and Germany. Canada has an even lower relative share of its R&D carried out by business (business expenditures on R&D or BERD). Approximately 60 percent of R&D expenditures in Canada are financed by business – about 1 percent of GDP – compared to the OECD average of just over 70 percent.[59]

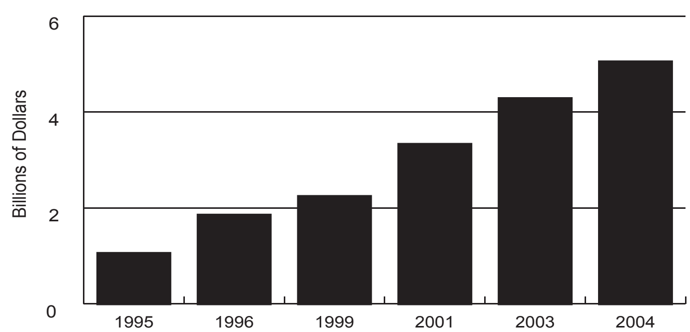
While business-financed R&D has been found to have a significant positive impact on productivity, the impact of publicly-funded R&D on productivity, according to various recent studies, is negligible. The OECD found that an increase of 0.1 percent in BERD intensity raises per capita output by 1.2 percent, while the impact of public R&D was not statistically significant.[60] Correspondingly, Industry Canada has found that a country with business R&D

intensity 10 percent higher than the OECD average will have labour productivity levels 2.4 to 5 percent higher, while the effect of public R&D on labour productivity was positive only when directed at higher education, and the effect of government R&D was "at best nil".[61] Other research has found that business-financed R&D also increases income levels; increasing BERD from 2 percent to 3 percent can raise real GDP per capita by as much as 12 percent.[62]

Commercialization of New Technologies

The commercialization of R&D is the most important step to ensuring the economic and social benefits of research become accessible to the public, and that researchers and companies have market incentives to create new technologies. Transforming an idea into a product or innovative process and commercializing the idea provides direct economic growth; without commercialization the financial payoffs of R&D are not fully realized, and indirect benefits through spin-off ideas and products are limited.

Figure 8: University Rersearch Funding in Canada



Source: Statistics Canada, Survey of Intellectual Propertry Commercialization

There are two sides to the success of the commercialization of R&D; the *supply* of ideas and of skilled labour and the *demand* for new products and processes by industry and the market. Canada has performed well on the supply side by increasing university research funding (from $1.1 billion in 1995 to $5.0 billion in 2004, see Figure 8)[63] and introducing tax measures to attract capital. However, there has been difficulty strengthening the demand side of the equation – demand for commercializing R&D and for talented personnel from business.[64] The federal Expert Panel on Commercialization highlighted Canada's cost containment business culture as the biggest hurdle to increasing R&D commercialization in the country. Promoting commercialization of ideas and new discoveries within business is fundamental to realizing lasting benefits from advanced research and development and to ensuring British Columbia's place as a national and global economic leader in the coming decade.

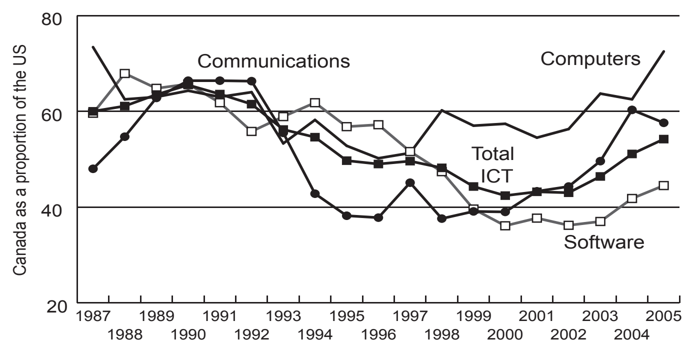
Knowledge Spill-over – Adopting Foreign Technologies

For small, open economies like BC and Canada, global and large partner country innovations are at least as important as our own R&D performance. One estimate suggests the average value of a dollar of United States R&D to Canadian productivity is 78 percent of the value of a dollar spent domestically on R&D. However, a sufficient domestic R&D sector may be a necessary condition for cross-border technological diffusion to take place effectively.[65]

Information and Communication Technology Investment

ICT investment by Canadian business lags that of the United States, and has done so since at least 1987. This gap has been identified as a possible cause of weak productivity growth in Canada and a primary cause of the large gap in productivity levels between Canada and the United States. Increasing ICT investment per worker, therefore, may help to increase labour productivity as the size of the labour force decreases.

Figure 9: ICT Investment per Worker, Business Sector



Source: Centre for the Study of Living Standards

In 2005, ICT investment per worker in the Canadian business sector was 54.2 percent of prevailing US levels. Figure 9 breaks this investment into communications, computer and software investment levels. In terms of ICT investment as a share of GDP, Canada was 68.5 percent of the US investment in 2005, up from 61.6 percent in 2004. Both measures (ICT per worker and ICT as a share of GDP) trended downward between 1987 and 2000 but rebounded in the first half of this decade. The improvement is mainly attributable to decreasing expenditures in the US, not improved investments in Canada.

Factors accounting for a large portion of Canada's low ICT intensity relate to our industrial structure and the size distribution of employment. Canada has a smaller share of employment in the ICT-intensive cultural and information industry (which includes telecommunications, finance, insurance and real estate). A larger share of Canada's employment is also in small and medium sized businesses (SMEs), which spend less on ICT than larger firms. These two factors account for 20 percent of the ICT gap. As well, ICT measurement is linked to the gap; for example, Statistics Canada may underestimate ICT investment in certain industries (oil & gas, fishing, and construction).[66] Other factors may include: cheaper labour to capital costs in Canada relative to the US; more FDI in Canada (foreign firms purchase ICT from their home country for use in Canada, but the investment is not recorded in Canada); and a lower proportion of university educated managers in Canada.[67]

Over the next decade, governments, businesses and individuals should continue to focus on the role innovation can and must play in improving productivity and living standards. In BC, much of this challenge relates to improving ICT take-up in non-resource industries and embracing a "forward-looking" focus dedicated to continuous improvement through adaptation and diffusion of advanced technology and building a highly educated society. We address education in more detail in the next section.

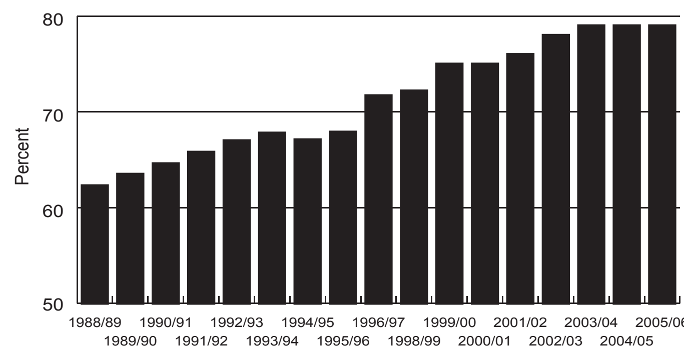
V. EDUCATION – ISSUES AND TRENDS

A number of education indicators – how BC children are currently performing, what level of education they are obtaining, funding levels for basic and post-secondary education, and participation rates in workplace training – provide a sense of both current and future *human capital* issues and trends in British Columbia.

Early Childhood Development

Research directed towards cognitive, educational and social development underscores the importance of early childhood years to a person's learning abilities, social skills and health status. Government organizations and school districts have recognized the importance of early childhood development, and have actively committed to facilitating early childhood development programs. For example, the provincial government initiated a "Strong Start" program recently which will use underutilized school spaces in a number of locations around the province to help pre-school children learn skills to enhance their readiness to learn once they reach Kindergarten. Continued focus in this area will be essential to prepare the next generation for learning and work.

Figure 10: Dogwood Completion Rates, All Students

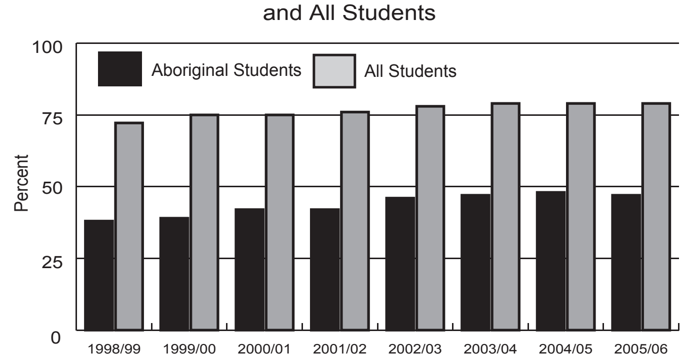


Source: BC Ministry of Education

K-12

In 2005/06, BC had a *high school completion rate* of 79 percent for the general population and 47 percent for the Aboriginal population. While this represents a long term increase over time in both measures, rates may have begun to plateau (see Figure 10 for trends from 1988/89 to present). The Aboriginal completion rate which is some 32 points lower than the general student population is very concerning (See Figure 11). As well, in 2005/06, BC Foundation Skills Assessment scores of students meeting or exceeding Ministry expectations for Grade 7 Aboriginal students are generally on the rise, but continued to be significantly short of general student outcomes. For reading comprehension, 52 percent

Figure 11: Dogwood Completion Rates, Aboriginal and All Students



Source: BC Ministry of Education

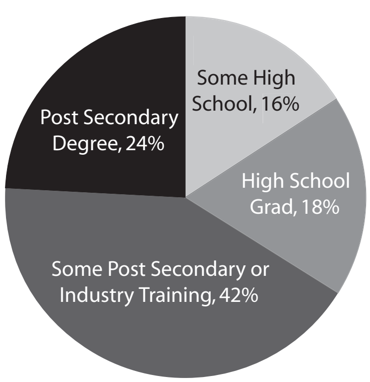
of Aboriginal students met expectations, compared with 73 percent for the general population; 73 percent versus 87 percent for writing; and, 66 percent versus 84 percent for numeracy.[68]

Another persistent gap in K-12 performance lies between rural and urban students. The 2003 Programme for International Student Assessment (PISA) scores show urban students outperforming rural students in all subjects (math, reading, and science) across all provinces.[69] In BC, urban completion rates hover around 90 percent, while rural rates were below 70 percent. Rural schools tend to be smaller and have difficulty attracting and retaining qualified teaching staff which can prevent rural schools from offering the same range of courses as urban schools. This can also impact on labour market engagement and post-secondary education uptake.[70]

High school completion is a significant factor in determining future success in employment and earnings. In 2004/05, 61.7 percent of 20-24 year old high school drop-outs were employed, below the employment rate for all 20-24 year olds at 67.8 percent.[71] In 2005, the full time paid employment "gap" for men aged 25 to 34 without a high school diploma compared to those with high school was almost 12 percentage points (62.9% compared to 74.6%); for women in the same age grouping the gap was almost 20 percentage points (33.4% compared to 53.1%).[72] Earnings of those who do find employment with less than high school are also below those who graduate. In 2000 a full-time, full-year worker who didn't complete high school earned $35,790 in BC, while a high school graduate earned $38,626. Someone with trades training earned $43,866, while a college graduate earned $44,201, and a university grad $58,038.[73]

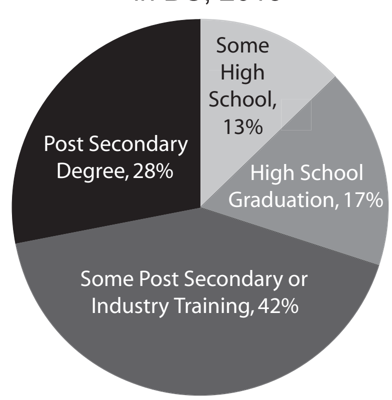
Figures 12 and 13 below demonstrate the impact a tightening labour market will likely have on education requirements. While jobs requiring some post-secondary and industrial training will remain constant at about 42 percent, there will be a decrease in jobs requiring either some high school courses or high school graduation (-4%) and a corresponding increase in jobs requiring university.

Figure 12: Employment Requirements in BC, 2003



Source: BC Ministry of Advanced Education

Figure 13: Employment Requirements in BC, 2013



Source: BC Ministry of Advanced Education

Significant efforts to target aboriginal/non-aboriginal and urban-rural gaps in K-12 education in BC will be needed to meet the provincial government's 85 percent completion rate target set for 2015, as well as to ensure BC students can effectively transition to trades, vocational training, or university studies and/or to further productive employment. And despite a tightening labour market and its implications for qualifications, progressively higher levels of education remain critical in efforts to build a knowledge-oriented economic base and a civil society during the next decade and beyond.

A Few Words on Spending

BC has historically spent more on K-12 education than other provinces. On average, between 1997/98 and 2003/2004, BC spent $6,888 per student (in 1992 dollars), ranking first in Canada, ahead of Quebec at $6,769, Ontario at $6,763 and Manitoba at $6,621. In the same period, education spending in BC increased by $461 per student (7.0%), below the national average of $579 (9.1%). All other provinces have experienced positive growth in education spending. In 2003/04, BC's spending per student was $156 below that of Manitoba and $121 below Quebec, but was ahead of the other provinces by $31 to $1,227.[74]

With the exception of Alberta and Ontario where there has been a slight increase, K-12 enrolment in most provinces has decreased – falling 10 percent for all of Canada from 1996/97 to 2002/03. At the same time, spending in most provinces either rose or decreased at a lower rate, resulting in higher spending per pupil. K-12 enrolment is expected to continue to decrease by 6.8 percent by 2008/09 and by another 6.4 percent to 2012/13. If provincial governments continue to increase expenditures at nominal rates to keep up with inflation, real per-pupil spending will increase by more than 12 percent by 2012/13.[75]

Increases in per pupil spending have not been directly linked to increases in student achievement. In fact, Ontario – the only province where expenditures have remained constant – had the largest improvement in science and math scores between 1996/97 and 2004/05, while P.E.I with a 46 percent increase in spending, registered no change or only very modest improvement.[76]

Post-Secondary

University Education

In 2006, 25.5 percent of British Columbians had a university undergraduate degree, behind Ontario's first place position at 28.4 percent. From 1997 to 2006, BC experienced the fifth highest average annual growth in the proportion of the population with a university education at 3.0 percent per year compared to the Canadian average of 3.2 percent per year.[77]

BC's graduate student enrolment, however, is below that of Alberta, Ontario and Quebec. BC recently began to fund graduate student places at its research universities, and to award scholarships for post-graduate students and fellowships to post-doctoral students. At the same time, Alberta and Ontario have plans in place to expand funding for post-graduate programs, and the latter has also announced that it will spend $1.6 billion by 2010 to fund 14,000 graduate places.[78]

The proportion of provincially funded university operating expenditures declined sharply from over 80 percent in the 1970s to 56 percent in 2001/02. Increases in tuition fees have picked up the slack with its share of revenues increasing from 7 percent to 20 percent over the same period, and the federal share of funding has also increased (from 18% in 1990/91 to 24% in 2004/05).[79]

Skilled Trades Training

While BC has the highest percentage of population with post-secondary education in Canada at 58.1 percent (aged 15+), skilled trade apprenticeship registrations and completions have declined relative to the provincial population since the early 1990s. In the coming decade, industries for which skilled trade workers are crucial – mining, oil and gas, and construction to name a few – are set to expand in the province provided the required skilled labour is available.

In 2004, there were 25,720 registered apprentices in British Columbia, compared to 54,170 in Alberta, and 267,775 in Canada overall. Between 1995 and 2004, the number of registrations in BC grew by 34.0 percent, well below the national average of 63.9 percent and ahead of only New Brunswick.

Fluctuations in the number of registrations reflect, in part, a relationship between the business cycle and the demand for skilled trade workers. Registered apprentices in Canada reached a high of 192,945 in 1991 after recovering from a recession in the early-and-mid 1980s before declining by 15.3 percent reaching a low of 163,370 in 1995 due to another recession and gradually increasing to 267,775 in 2004. Due to the construction boom in the early 2000s, registration in the building construction trades was the largest in 2004 at 60,610. Between 1999 and 2004, all major trade groups showed strong increases in registrations ranging from 24.2 percent for "Industrial and Related Mechanical" to 66.1 percent in "Building Construction Trades".[80]

According to the list of High Opportunity Occupations in BC for 2006-2008, high levels of construction have increased the demand for skilled trade workers, to the point where projects in some local markets are being delayed due to skilled labour shortages.[81] High demand and programs such as ACE-IT and the secondary school apprenticeship program should correspond to further increases in skilled trade enrolment in the short term. However, there are some hurdles to overcome in increasing apprenticeships and trades training in BC, including countering negative perceptions of skilled trade careers of some parents and high school students, smoothing the transition from K-12 to skilled trades training in colleges and institutions, increasing business involvement in the hiring of apprentices, and further eliminating barriers to inter-provincial credential recognition.

Life-long Learning and Adult Literacy

While literacy levels of Canadians compare favourably internationally, 40 percent of the working-age population – or 9 million 15-65 year olds – do not meet the minimum proficiency levels required to cope with increasing demands of a knowledge-based economy, according to the OECD.[82]

The International Adult Literacy Survey (IALS) measured adult literacy for 1994 and 1999, using a five-level scale (1 low, 5 high). The Conference Board of Canada, using data from the 1999 survey found that:

- 16.6 percent of all Canadians aged 16-65 received level 1 scores;
- 25.6 percent received level 2;
- 35.1 percent achieved level 3 scores; and
- 22.7 percent of all Canadians aged 16-65 achieved scores of level 4 and level 5.[83]

Level 3 is the minimum level employees require to perform their job duties well – i.e. ability to read and understand work-related documents and information on health and safety procedures, and the ability to communicate effectively.[84] In 2003, according to the new International Adult Literacy and Skills Survey (IALSS), the percentage of those workers above the Level 3 cut-off in the Yukon, BC, Alberta and Saskatchewan, was significantly higher than the Canadian average while Quebec, New Brunswick, Newfoundland and Labrador and Nunavut was significantly lower.[85] Overall literacy levels haven't changed much between 1994 and 2003. Under 60 percent of the working age population in Canada have the minimum IALS/IALSS level needed to be effective at work. Since over a quarter of the Canadian labour force score at level 2, moving all or a portion to level 3 would likely lead to significant productivity gains.[86]

While BC's literacy levels are well above the Canadian average, continuous efforts should be focussed on raising levels further. In critical ways, an educated and literate population is the "lynch-pin" in growing a knowledge-based economy and maintaining a civil society.

VI. ENVIRONMENT – ISSUES AND TRENDS

BC a National Leader

In 2004, British Columbia ranked 1st on the Progress Board's Environmental Quality Index, which combines performance indicators of urban air quality (Vancouver ranked 5th), greenhouse gas emissions (2nd at 15.9 tonnes of CO^2 per capita) and protected areas (1st with 13.0% of the land base protected from industrial and commercial activity).[87]

Internationally, BC underperforms on rankings of greenhouse gas emissions per capita (15.4 tonnes per capita), at 21st of 28 OECD jurisdictions in 2003. Overall, Canada performs even worse, ranking 26th with per capita emissions of 23.8 tonnes per capita.[88] In recent months, climate change has emerged as a dominant issue on the provincial and national policy agendas. This and other environmental issues and trends are discussed in further detail below.

Environmental Impacts of Population Growth

A growing population will impact the environment that supports it – there will be higher demand for urban land, more roads and transportation infrastructure, increases in energy use, and larger amounts of waste. By managing development and the impact of impending growth, BC can ensure the least amount of environmental damage comes as a result of a growing British Columbia.

Following a period of rapid urbanization from 1993 to 1998, conversion of land to urban use in the Greater Vancouver area slowed considerably between 1998 and 2002. For example, the amount of land deforested, meaning permanently removed from the forest land base for human use, was 300 hectares (ha) between 1986 to 1993 increasing substantially to 2,899 ha from 1993 to 1998, but decreasing to 121 ha for 1998 through 2002.[89]

Population growth will also have impacts on water quality and quantity, as discussed further in Box 7 below. Canada accounts for seven percent of global fresh water resources and 25 percent of global wetlands, and has the world's longest coastline.[90] Though the resource is seemingly bountiful in British Columbia and Canada, water quality problems in Tofino, advisories issued in the Lower Mainland in fall 2006, and lasting memories of Walkerton, Ontario in 2000 should serve as a reminder of the need to be vigilant with provincial freshwater supplies. Future plans should focus on both demand management – managing increasing demand levels in high development areas such as Vancouver, Victoria and Kelowna – as well as protecting water quality to ensure safety.[91] As the province continues to experience growth, monitoring and ensuring the quality of our water resources will take on greater urgency. While water quantity considerations involve conservation, flood protection is another strategic consideration in this area. The Fraser Basin is particularly flood prone, and is overdue for a "100 year" flood. Over the next decade, all orders of government should continuously review preventative measures and flood control plans to ensure that British Columbia is ready for this inevitable event.

Box 7:

Water Quality and Quantity in Large Urban British Columbia

Both water quality and quantity in British Columbia face a threat as the province's population and water consumption continue to accelerate, especially in proximity to the Lower Mainland. Between 1991 and 2001, the quantity of water used per day in the Fraser Basin, for example, rose by over 21%, although per capita use decreased by 7%. Over the past decade, the Thompson region saw a reduction in total water used per day as well as the per capita daily use, while the Fraser Valley experienced a 167% increase in total daily use and a 21% increase in per capita use.

In the Fraser Basin, residential water use accounted for 63% of total water use, while 30% was used by industry, institutions and business and 7% by system flushes, leakages and unknown sources. In 2001, the average Canadian used 335 litres of water each day, which amounts to more than twice the water use in Europe. Communities have increased their efforts to limit water consumption, particularly with the aid of water meters, resulting in an increase in the number of sampling basins from 13 in 1998 to 20 in 2004. Other measures that could lead to significant decreases in water consumption include converting to low-flow showerheads and toilets, performing water audits, and considering province-wide standards for rainwater harvesting and recycling.

Source: Fraser Basin Council

Balancing Environment and Development

Many of BC's key land based industries – forestry, mining, tourism, and energy – depend on a healthy, resource-rich environment. In recent years, British Columbia has built a track record of finding a balance between development of land and resources on the provincial land base and protection and preservation. In this respect, BC is a national leader with the highest percentage of the provincial land base protected from commercial development.

In contemporary British Columbia, meeting the challenges and opportunities provided by growing trade and commercial relations with the United States and the Asia-Pacific is essential to future economic growth. In the Lower Mainland, the Gateway program to remove bottlenecks and improve transportation region-wide, exemplifies the complexity involved in balancing necessary development with environmental protection. As Greater Vancouver's population has grown, road congestion has hampered productivity growth and the smooth movement of goods, services and people. For example, commuting times have increased by 30 percent over the past decade, and Transport Canada estimates the current cost of congestion in the region to be up to $1.5 billion per year. Construction of the Gateway project will contribute $1.7 billion to BC's economy, and 17,000 person years of direct employment, and will reduce travel times by 5-30 percent over 2003 levels. Environmental consequences are both beneficial (e.g. reduced idling time, fewer emissions, and increased cycling infrastructure) and costly (e.g. increased volumes of traffic).[92]

Environmental costs should – to the greatest extent possible – be accounted for without inhibiting development plans. Moving forward, all orders of government will have to consider greater use of demand management techniques in a host of areas – from water use, to energy consumption, to transportation activity – to encourage more efficient use, while minimizing the environmental impacts. This implies a range of tools from persuasive options such as "metering" to regularly show consumers how much they are using (e.g. for water and energy use) to "price signals" where consumers pay more for certain types, time, or quantity of use (e.g. tolls, time of use pricing, etc. in transportation). Though these measures are often not popular, they will likely become absolutely critical in efforts to maintain a healthy and vibrant economy and to manage environmental impacts particularly, but not exclusively, in the Lower Mainland. They can also play a central role in meeting government climate change targets.

More on Sustainable Urban Development

The percentage of British Columbians living in urban centres – particularly Greater Vancouver where more than 50 percent of all BC residents live – has grown substantially over the past two decades and is predicted to grow even further by 2031. Population density in Greater Vancouver is predicted to be more than 1,005 persons per square kilometre in 2031, more than 179 in Victoria, and about 102 in Nanaimo. Other regions predicted to have higher population density in 2031 include the Central Okanagan (88), Cowichan Valley (30), and the Fraser Valley (31).[93]

Many environmental benefits can accrue from denser urban populations, not least higher use of public transit and other non-car transport options and less land area used per person for roads and other infrastructure. However, increasing populations in surrounding areas – for example the Fraser Valley and Greater Vancouver suburbs, as well as the Cowichan Valley relative to Greater Victoria – can mean higher environmental impacts through air pollution due to increased car use, expanded commuting corridors, and conversion of agricultural or otherwise natural lands for residential or urban uses.[9]

Past strategies and land use policies such as the Agricultural Land Reserve have by design or default succeeded in encouraging urban density in British Columbia. For example, in spite of high yearly average population growth rates, during the 1990s Vancouver was able to increase the share of its population in compact, transit-oriented or pedestrian-friendly neighbourhoods from 51 to 62 percent of the total. In comparison, Seattle's compact population grew from just 21 to 25 percent.[95] Future growth needs to keep these past successes in mind and wherever possible build upon them. In this connection, demand management techniques referred to previously, along with compact urban forms and reliable transit options will provide the means for communities to facilitate inevitable growth while minimizing environmental impacts.

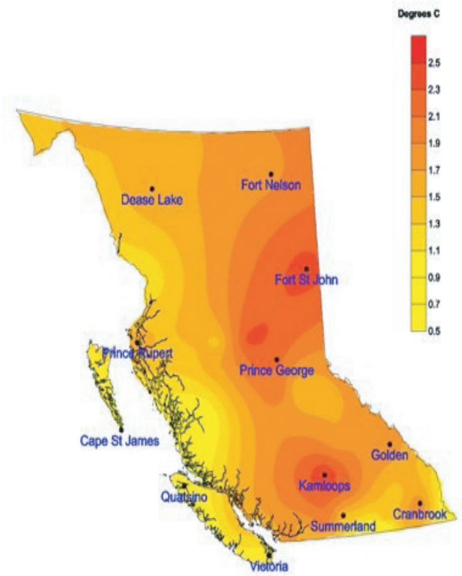
Climate Change

Long-term trends from 1950 to 2000 show increasing temperatures throughout the province, with average minimum daily temperatures increasing at a faster rate than maximums (see maps on the next page), and winter and spring temperatures rising faster than those in the summer. Temperature increases have been more pronounced in the Interior than in coastal areas. Throughout the province, this has created milder year-round weather, fewer days of frost and longer growing seasons. Research also shows that patterns of rainfall are changing across the province, with the Okanagan and North Coast having increasingly wetter springs, while the South Coast's precipitation patterns remain relatively constant over the past 50 years.[96]

The economic costs of mitigating human-induced climate change are high and concentrated in the short term, while possible benefits are long-run and spread over both time and physical area. One 2001 report estimated the cost of achieving the Kyoto target to reduce greenhouse gas (GHG) emissions would be $120 per tonne CO2 equivalent emission and would necessitate a 10 to 100 percent increase in electricity prices, 60 percent increase in natural gas prices and 50 percent increase for gasoline.[97] Canada's emphasis on voluntary initiatives to reduce emissions in the past has been evaluated as both environmentally ineffective and economically inefficient. A 2004 study suggested going forward that the government pursue sector-specific, market-driven regulations such as requiring a minimum market share for low-emission technologies and energy forms, or setting maximum emissions for major industries, implemented with flexibility over time.[98]

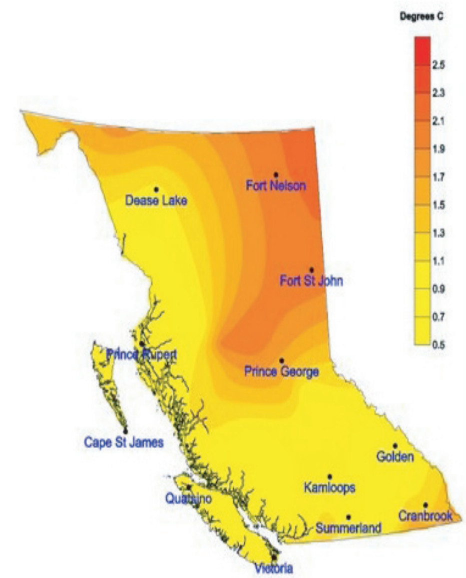
Adapting to climate change will also involve costs for the public and private sectors. This includes activities that minimize negative impacts of climate change or encourage the de-

Figure 14: Trend in Minimum Temperatures from 1950



Source: Environment Canada

Figure 15: Trend in Maximum Temperatures from 1950



Source: Environment Canada

velopment of new opportunities that arise. While mitigation strategies are necessarily global in scale, adaptation involves tailoring implementation to meet local circumstances. Canada as a whole faces the prospect of significant costs related to adapting infrastructure – roads, bridges and water-related – due to the impacts of rising sea levels. Planning for climate change can also yield substantial economic benefits. For example, some predict that if adaptation measures are implemented correctly in the agriculture industry, there is the potential to turn a projected loss of $2.5 billion into a gain of $10 billion.[99]

Over the next decade, it is imperative that British Columbia address climate change policy in a measured, balanced and economically sensitive fashion. The key will be to find means to wherever possible "ensure a positive sum" outcome where economic growth is optimized while measures are taken to tackle the root causes of climate change.

VII. HEALTH – ISSUES AND TRENDS

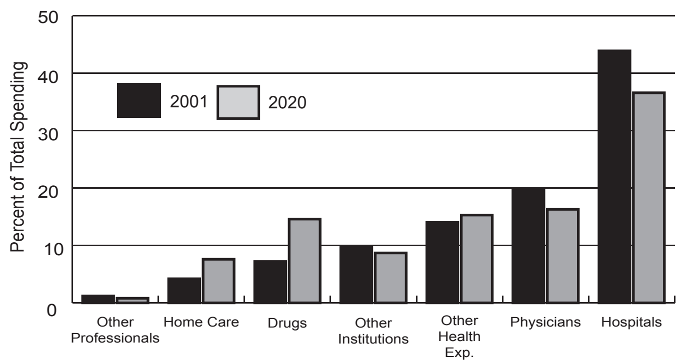
BC's Health Outcomes Performance

BC has ranked first among the provinces over the entire 1995 through 2004 period for the Progress Board's Health Outcomes Index, including the top rank for life expectancy at birth (2005/06), cancer mortality (2004), infant mortality (2004), and potential years of life lost (2005) and a second place rank for cardiovascular mortality (2004).[100]

Rising Expenditures: Cost Drivers and Escalators

Health care expenditures in BC increased from $3.5 billion in 1976 (constant 1997 dollars), to $5.1 billion in 1986, and further to $10.1 billion in 2006. As a percentage of GDP, BC's health expenditures have grown from 5.5 percent in 1982 to 7.2 percent in 2004. As a percentage of provincial spending, health expenditures were 26.6 percent in 1976 and 40.2 percent in 2006.[101] On a per capita basis, BC ranked 5th overall among the provinces in provincial health care spending at $2,855, behind Alberta ($3,183), Manitoba ($3,152), Newfoundland and Labrador, and Saskatchewan ($2,997).

Figure 16: Provincial/Territorial Health Care Spending by Component



Source: Canadian Institute for Health Information

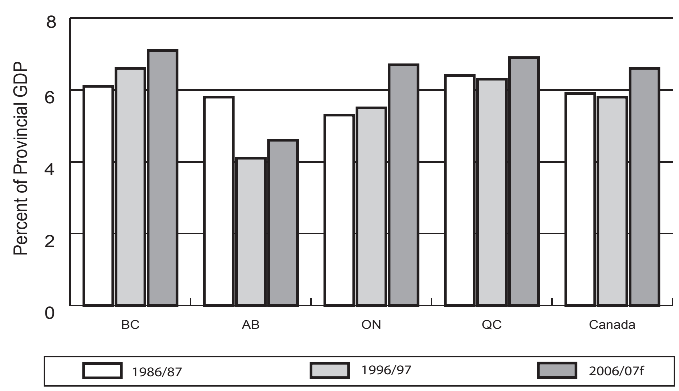
While provincial health expenditures will likely continue to rise, trends will vary between different spending components. As a share of total nominal provincial spending, some estimates suggest drug spending may increase from 7.2 percent in 2001 to 14 percent by 2020. Spending on home care is also expected to grow, from 4.2 percent in 2001 to 7.6 percent in 2020. Meanwhile, hospitals' share of spending is expected to fall from 43.9 percent in 2001 to 36.6 percent in 2020. Costs for physicians, other professionals, and other institutions are also expected to account for a smaller share of total expenditures by 2020. Figure 16 provides a breakdown of provincial and territorial health expenditures in 2001 together with predictions for 2020.[102]

Current indications are that provincial health expenditures will increase annually by 5.3 percent in nominal terms through to 2020.[103] One recent leading study categorizes the reasons for health care cost increases into: 1) ***Cost Drivers*** – underlying, societal-level structural forces that impact health care costs including: population growth, ageing growth, increasing expectations, and a rise in chronic diseases; and, 2) ***Cost Escalators*** – industry-specific trends that act to increase spending, including: pharmaceutical development, new technologies, home care increases, access, patient safety, and health human resources.[104]

Caring for an ageing population has the potential to increase health care costs substantially. For example, real per capita hospital costs in 2001 for 45–54 year olds were $514 (males) and $546 (females), respectively which increased to $2,409 (male) and $1,964 (female) for those aged 65–74. Meanwhile, real per capita hospital costs for those 85+ are $8,689 (males) and $9,052 (females), due to longer hospital stays, increased costs associated with pharmaceuticals, and more intensive medical care. Ageing is expected to account for one-third of estimated real health expenditure growth, and unlike other cost pressures (e.g. inflation and population growth), ageing comes with no offsetting increase in income or wealth that can finance additional cost escalation.[105]

In Canada, ***chronic illness*** affects 16 million people and accounts for 87 percent of disability. Cardiovascular disease, cancer, chronic obstructive lung diseases and diabetes result in two-thirds of total deaths and are the leading causes of hospitalization. However, chronic diseases are also among the most preventable. Primary causes often include lifestyle choices such as smoking, obesity, and physical inactivity. In 1993, cardiovascular, cancer, diabetes, kidney and respiratory diseases cost Canada in excess of $17 billion, or more than 40 percent of all direct costs for all illnesses. By 2004, it is estimated that cardiovascular disease, diabetes and cancer cost the Canadian economy more than $45 billion. Chronic disease accounts for approximately 67 percent of all direct health care costs and 60 percent of total indirect costs, including lost productivity and foregone income. Costs are expected to increase further due to demographic shifts, as older Canadians are more likely to develop or contract chronic diseases.[106]

Figure 17: Provincial Government Health Expenditure as a Percent of GDP



Source: Canadian Institute for Health Information

Growth in ***pharmaceutical expenditures*** outpaced overall health spending since 1984. Total Canadian spending on drugs was estimated at $18.1 billion for 2002, and accounts for about 16 percent of all health spending, up from 12 percent in the early 1990s and 8.8 percent in 1975. Combined public sector spending on drugs now totals $6.6 billion, or about 8 percent of all public health spending, more than double what it was 20 years ago. Growth in public drug expenditures is 9.3 percent in nominal terms, which amounts to a real increase of about $400 million annually.[107] There has also been a gradual trend toward greater public funding of pharmaceuticals over the past 25 years. In 1975, public expenditures accounted for approximately 15 percent of all drug spending, rising to 30 percent by the mid-1980s, and further to 36 percent in 2002.[108]

Prices of *existing* drugs have been relatively stable for the past 10 years; higher prices are primarily the result of *new* drugs introduced at higher costs than products they displace. Increased utilization may also have increased spending, though this is difficult to quantify. One forecast in 2004 suggests that if current trends continue uninterrupted, prescription drugs will grow from about 7 percent to 15 percent of all provincial costs by 2020.[109] It is important to note that increasing costs for pharmaceuticals should be examined within the context of a population which is living longer, in part, because of remedies that were previously not available and improved outcomes resulting from costly research and development. In other words, escalating costs are a key issue and trend within the health care system, but pharmaceutical expenditures should be examined in the context of potential health benefits and system-wide savings from disease prevention.

Home care expenditures grew at an annual rate four times greater than other health spending (9% vs. 2.2%) during the 1990s. Public home care expenditures in Canada overall reached $2.6 billion in 2000. There is considerable variation within Canada, from 1.2 to 6.6 percent of total provincial or territorial health budgets, with per capita spending ranging from $48 to $194 in 2001-02.[110]

The shift towards greater use of home care in Canada is driven by a number of factors: changes in other parts of the health care system, particularly the hospital sector, where hospital beds and nursing home beds were reduced by 30 percent and 11 percent, respectively, during the 1990s; population ageing, as home care demand is highest for those aged 80 plus; new technologies and more user-friendly equipment allowing more care to take place at home; a general increase in demand as more Canadians prefer home care over hospitalization; and, higher compensation for home care workers.[111]

Turning to ***health human resources***, cost containment strategies during the 1990s succeeded in containing expenditures on physicians and nurses. Assuming that the physician-patient ratio remains constant over the long-term, spending on physicians is expected to increase slightly in the short term but remain stable at just over 20 percent of health care spending over the medium term.

Nurses experienced a relative and absolute decline in numbers during the 1990s, although those who stayed employed saw increased employment income, primarily through more hours worked. During this period, the number of registered nurses grew 2 percent, while managerial nursing positions decreased by 48 percent and licensed practical nurses fell by 11 percent. For RN's that remained in the labour force, median income increased by 17 percent while LPN's incomes increased by 11 percent. However, although health human resources are a relatively slow growing component of health expenditures – thanks to cost containment strategies such as billing caps and workforce downsizing – spending may increase in the future due to rate increases and increases in the number of health care practitioners (physicians and nurses).[112] In BC, employment in health is expected to increase by 2.4 percent per year from 2003 to 2013, with 28,200 new positions added over the ten year period.[113]

Increased utilization of health care has been a primary determinant of escalating health care costs, with much of it attributable to advancements in technology which are estimated to account for 25 percent of health expenditure growth in the US and likely a similar share in Canada. Top components of this include medical imaging (e.g. MRIs, CT), surgical procedures, and predictive genetic testing. An estimated $2.1 billion was spent on diagnostic medical imaging in 2000. In addition to capital costs of imaging equipment, human resource costs required to operate machinery and interpret results are also very significant.[114]

Unlike other industries, ***technological innovation*** in health care is a source of increasing health care expenditures. New health technologies are, for the most part, not substitutes for existing techniques, but rather directed at treating previously untreatable conditions. In this regard, innovation reduces costs when activities are shifted from old approaches to new, more technology intensive ones, or resources are diverted to productive activities elsewhere.

However, it is difficult to reduce cost drivers such as hospital capacity, employment, number or specialties of surgeons and employee compensation in the context of a diverse, public health care system, especially in sparsely populated areas.[115]

Technology has also increased the utilization of surgical procedures. Patients whose condition did not previously justify risks of surgical intervention might be considered candidates for new procedures. The use of predictive genetic tests is another cost escalator that may be a cost effective way to allow patients and practitioners to plan ahead for late-onset diseases and for certain patients to undertake preventative treatment for conditions for which they are genetically susceptible.[116]

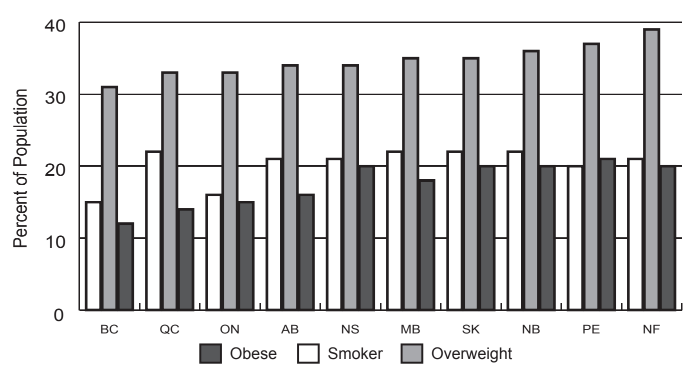
Prevention and Healthy Living

One way to reduce the demand for health care services, even as the population becomes older and available treatments increase health costs, is to promote healthy living, including a balanced diet and regular exercise. Preventative measures have the potential to produce both direct and indirect cost savings, and to improve the individual lives of British Columbians.

A 2001 study estimated the cost of obesity in BC – measured as the cost of obesity related illnesses to the health care system – to be $380 million annually, or 4.5 percent of direct health care costs. Including indirect costs of obesity to overall productivity, total costs are estimated to be between $730 million and $830 million per year, or about 0.8 per cent of provincial GDP. This is second only to the direct and indirect costs of smoking ($1.2 billion) in preventable health care related cost drivers.[117]

Other analysis for British Columbia has estimated the annual age-adjusted per capita health care costs for a normal weight, physically active non-smoker to be $1,003 and the cost for an overweight/obese, physically inactive smoker to be $2,086, or more than double. Using these figures, the cost of physical inactivity, overweight/obesity, and smoking in terms of health care costs alone for those over 25 years of age was $1.8 billion for 2004/05.[118] Some suggest that reducing physical inactivity by 10 percent would save $150 million in health care costs per year for Canada overall.[119]

Figure 18: Overweight, Obesity and Smoking Rates



Source: Canadian Institute for Health Information

While BC has lower and decreasing rates of smoking, relatively high rates of physical activity and low obesity rates, the percentage of overweight individuals in the adult population is increasing. Figure 18 details the prevalence of obesity, smoking, and overweight across provinces; BC has the lowest rates in all three areas.

Prevention of disease and other problems, through lowering the prevalence of smoking and overweight rates while increasing physical activity, is likely among the best means to curb rising provincial health care costs in the medium to long term. Prevention also places responsibility for health care where it ought to be – squarely in the hands of individuals.

Pandemic and Infectious Diseases

Pandemic influenza has occurred at intervals ranging from every 10 to 50 years, according to historic documentation, since at least the 16th century. The last three global influenza pandemics occurred in 1918-1919 (the "Spanish Flu" which killed more than 40 million people worldwide), 1957-58, and 1968-69.[120]

Many experts believe the H5N1 strain of avian influenza, evident in birds throughout Asia since 2003, may be the root of the next influenza pandemic due to a lack of immunity in the general population to the strain and its documented direct transmission from birds to humans. However, H5N1 has not been transmitted human-to-human, and has therefore not yet spread rapidly or globally.[121] As of March 2007, 284 humans have been confirmed infected in 12 countries, 169 of which have died.[122] H5N1 has yet to be found in birds or humans in Canada. Previous pandemics spread along sea lanes throughout the world in six to eight months – a 1580 Asian pandemic spread to all continents in less than a year.[123] This pace has no doubt been accelerated by the frequency and ease of travel and transportation, and the integration of global trading patterns in the 21st century.

The potential costs of a pandemic are large, and the immediate economic and social disruption would be significant. Some estimates suggest annual GDP growth would drop 2 percentage points (in a mild pandemic) to 6 percentage points (in a severe one). A pandemic that targets 15 to 40-year olds would further aggravate the skewed population distribution prevalent in BC, Canada and most of the developed world. Direct health care costs would be immense, and would impact many industries, not least the tourism and travel industries, trade-dependent sectors, entertainment, restaurants and many providers of non-essential services.[124]

Box 8: BC and a Prospective Pandemic

The BC Pandemic Influenza Preparedness Plan estimates that in a current influenza pandemic, more than three million people in BC will become infected, close to two million will become clinically ill, over half a million will visit a health care provider, 18,500 will need hospital care and as many as 6,800 will die from virus and related complications.[125] Every year, there is an average of 4,000 deaths in Canada from the flu – Health Canada estimates this number will increase to somewhere between 11,000 and 58,000 deaths in a moderately severe pandemic, where 15 to 35 percent of the population would become ill.[126] Ensuring that BC is prepared for a pandemic of this scope should continue to be a top health policy and program priority.

VIII. SOCIETY – ISSUES AND TRENDS

Immigration and Labour Market Demand

In 2005, 44,734 persons immigrated to BC, with 77.5 percent coming from Asia and just over 10 percent from Europe.[127] According to the 2001 Census, 22 percent of British Columbians are visible minorities, the highest percentage in Canada (Ontario is second with 19%), while 26 percent of all British Columbians are immigrants. In terms of identified ethnicity, the top groups include traditional European backgrounds such as English, German, Scottish, Dutch, Irish, Italian, Ukrainian and French, but also increasingly Asian ethnicities such as Chinese, East Indian, Filipino, and Korean.[128] Table 5 outlines immigration to BC from area of last residence for 1999 to 2005.

Table 5: BC Immigration by Area of Last Permanent Residence, 1999 to 2005

	1999		2001		2003		2005	
	number	percent	number	percent	number	percent	number	percent
Europe	4,499	12.5	4,526	11.8	3,825	10.9	4,622	10.3
Africa	1,187	3.3	1,345	3.5	1,099	3.1	1,131	2.5
Asia	27,414	76.2	29,046	75.9	27,020	76.7	34,653	77.5
China-Mainland	8,301	23.1	9,757	25.5	9,786	27.8	13,688	30.6
India	4,492	12.5	5,033	13.1	4,699	13.3	5,753	12.9
Taiwan	3,550	9.9	1,921	5.0	536	1.5	2,240	5.0
Hong Kong	1,335	3.7	670	1.8	1,594	4.5	677	1.5
Australasia	288	0.8	451	1.2	454	1.3	520	1.2
N. & C. America	1,680	4.7	1,657	4.3	1,636	4.6	2,597	5.8
USA	1,103	3.1	1,073	2.8	1,160	3.3	1,956	4.4
Caribbean	136	0.4	130	0.3	118	0.3	159	0.4
South America	462	1.3	644	1.7	667	1.9	699	1.6
Oceania	281	0.8	452	1.2	420	1.2	303	0.7
Not Stated	46	0.1	38	0.1	0	0.0	50	0.1

Sources: BC Stats; Citinzenship and Immigration Canada

Over 87 percent of all immigrants to BC in 2005, or 39,001 people, were destined for the Vancouver area, up from 77 percent in 1999. In 2001, 38 percent of Vancouver residents were immigrants, and close to two-thirds of Vancouverites are either immigrants or the children of immigrants.[129] It is projected that 44 percent of Vancouver's population will be immigrants in 2017 and 49 percent, or almost half, will be visible minorities.[130] In 2005, over two-thirds of all immigrants to BC were from the economic immigration classes, compared to less than 60 percent for Canada overall.

While immigration of skilled workers has been identified as a method to mitigate the impacts of ageing on the size and average skill level of the labour force, it is unclear the extent to which it will make a contribution. A recent study found that even though the average age of immigrants is lower than Canadian-born residents, and even if immigration rates were to rise to one percent of the population per year (up from a historical high of 0.81% in 2005), immigration will not have a significant effect on the ageing profile of Canada's population.[131] Despite the high proportion of economic immigrants, in 2001 only 63 percent of recent immigrants (i.e. those arriving in the past five years) aged 25-54 were employed compared with 83 percent of Canadian born residents. Twenty years earlier in 1981, the employment rate for immigrants was 78 percent, on par with Canadian-born residents for that year.[132] In terms of educational attainment, 42 percent of recent immigrants in 2001 had a university degree, compared to just 18 percent in 1981.[133]

Statistics Canada has found the "earnings gap" between recent immigrants and Canadians has been increasing since 1975-1979, even when controlling for factors such as education and work experience levels. And even as low-income incidence has been on the decrease for Canadians overall (from 17.2% in 1980 to 14.3% in 2000), it increased for immigrants in the same period, from 24.6 percent in 1980 to 35.8 percent in 2000.[134]

First Nations

BC's First Nations population is growing and is younger than the general BC population. While the First Nations population experiences growth, several gaps continue between Aboriginal and Non-Aboriginal outcomes in measures of education, health and personal income. Crime rates – both in terms of perpetrators and victims – are also higher for Aboriginals in the province. Aboriginal populations are three times as likely as non-Aboriginals to report being the victim of a violent crime in Canada.[135]

Recent research on Canadian Census Metropolitan areas, including Vancouver, Edmonton, Calgary, Winnipeg, Regina, Saskatoon, Sudbury, Thunder Bay, Toronto, Ottawa-Hull and Montreal has identified a link between increased educational attainment and a significant decrease in the gap between Aboriginal and non-Aboriginal employment rates. In 2001, for example, employment rates of Aboriginal young adults (aged 25 to 44 years) with a University degree in CMAs across the country were on par or higher than those of similarly educated non-Aboriginals, with the exception of Regina and Saskatoon.[136]

Unfortunately, significant gaps in educational attainment, both K-12 (as detailed in Part V of this paper) and in post-secondary education between aboriginals and non-aboriginals persist despite some progress over time. In 2001, 38.7 percent of Aboriginal Canadians aged 25-64 had less than a high school education compared to 22.7 percent for the total population. As well, just 7.8 percent of the Aboriginal population had a university degree, compared to 22.6 percent of Canadians overall. In this context, skilled trades are a bright spot for Aboriginals – 15.6 percent have completed trades training, compared to 12.9 percent of the overall Canadian population.[137]

Working to close education, employment and health gaps must continue to be a prime focus to improve Aboriginal living standards. This will require a focused, multifaceted approach, which includes all levels of government, business, community interests, and First Nations.

Democratic Participation and an Active Citizenry

According to the 2004 Survey of Giving, Volunteering and Participating, the volunteer rate in British Columbia for 2004 was 45 percent, mirroring the Canadian average. BC had the highest average annual volunteer hours in the country, at 199 hours per volunteer. The donor rate for the same year was 77 percent in BC, the lowest of all ten provinces and below the Canadian average of 85 percent. As well, 78 percent of BC residents said they were informal volunteers which is also the lowest rate among the provinces. Sixty-six percent of British Columbians participated in some form of community group or organization in 2004, right at the Canadian average, and below Saskatchewan (72%), Ontario and Prince Edward

Island (70%), and Manitoba and Alberta (69%).[138] Overall in Canada, volunteers contributed almost 2 billion hours in 2004, equivalent to one million full time jobs, while donations in Canada totalled $8.9 billion in 2004.[139]

Voter participation in British Columbia, after decreasing in the late 1990s and early 2000s, has seen improvement in both the recent federal and provincial elections. Federally, 63.7 percent of voters cast ballots in 2006, up from 63.3 percent in 2004, and 63.0 percent in 2000, but down from 1997 (65.6%) and 1993 (67.8%).[140] In British Columbia provincial elections, 57.8 percent of all eligible voters voted in 2005, up from a low 55.4 percent in 2001, but still below the participation levels in recent years (59.1% in 1996, 64.0% in 1991, 66.8% in 1986 and 70.3% in 1983).[141]

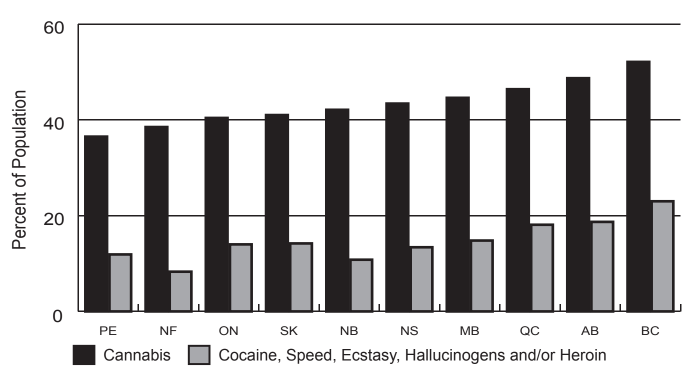
Over the next decade, efforts should be taken to improve the participation of BC citizens in volunteering together with their engagement in the electoral process.

Crime and Addiction

While crime rates in BC have improved over the past decade, BC is still above average Canadian rates for violent, property, and other crimes.[142] In 2005, BC had the highest rates of total drug offences (607 per 100,000 population) nearly double that of the next highest province (Saskatchewan, with 310 per 100,000), and the highest total property offence rate in Canada (6,234 per 100,000 population), over 1.6 times the national rate of 3,738. BC was above the national average (943 per 100,000 population), for violent crime at 1,214 per 100,000, below both Saskatchewan (1,983) and Manitoba (1,599).[143]

Crime is a drag on the province both directly, by reducing the population participating in the productive economy and indirectly, through heightened costs associated with prosecuting crimes. At the root of many crimes is substance abuse and addiction. While alcohol-use and abuse in BC is similar to other provinces and the Canadian average, the use of cannabis and other illegal drugs is higher in British Columbia compared to other provinces. A recent study on substance abuse found that the percentage of the population that exhibited hazardous drinking behaviour in 2004 was lower in BC (13.4%) than all provinces except Quebec (11.9%). However, some 52.1 percent of British Columbians had used cannabis in their lifetime and 16.8 percent had used it during 2004, representing the highest rates in Canada and well above the Canadian averages of 44.5 percent and 14.1 percent respectively. Lifetime use of any one of cocaine, speed, ecstasy, hallucinogens, and heroin was also higher in British Columbia than Canada. Higher use of illegal drugs, similar to crime overall, has

Figure 19: Lifetime Drug Use, 2004



Source: Canadian Centre for Substance Abuse direct and indirect effects on BC's economic, health and social well-being.[144]

Monitoring and Reducing the Incidence of Poverty

In 2005, BC ranked second last in Canada in terms of the proportion of families living below low income cut-offs (LICO) at 17.3 percent compared to the Canadian average of 15.2 percent and top performing PEI with 9.4 percent. BC's share has been above the Canadian average since 1995, and while it has been on a generally decreasing track since 1997, British Columbia had the lowest annual improvement of the provinces between 1996 and 2005.[145]

Previous Progress Board research suggests that lower labour market engagement in BC vis-a-vis Canada, as well as differences in provincial and federal transfers and taxes explain some of the difference in BC's performance on LICO. BC's underground economy – unreported legal activities such as under-the-table services, and illegal activities such as those related to the drug trade – is likely a contributing factor to BC's lower relative labour market engagement. Paradoxically, BC's official employment rate has been climbing steadily over the last five years. Though direct measurement and comparison of the size of the underground economy is difficult due to its hidden nature, a larger relative service sector and higher drug-related crime and drug use suggest BC likely has a larger underground economy than Canada overall. Underground economic activity blurs the relationship between official low income and measurements of poverty. However, despite this, efforts to monitor and reduce poverty by increasing productive labour market engagement must continue to be a priority. Recent provincial initiatives to increase housing options is an important initiative to help improve living standards for many people, especially for those in strained circumstances.

IX. SUMMARY AND OVERVIEW – SOME STRATEGIC CONSIDERATIONS FOR BRITISH COLUMBIA'S FUTURE

British Columbia's economy and society is rapidly changing, but continues to be shaped by many traditional forces as well. This report has – based on the best available recent and forecast information – attempted to outline some of the major issues and trends likely to impact British Columbia in the near to medium term. Rather than make specific recommendations for government, business, community and individual action, this report sketches the principle strategic considerations for British Columbia's future shaped by current and forecast issues and trends. The intent is to help inform policymakers and the public-at-large about some of the key challenges and opportunities facing British Columbia with a view to ensuring the province continues to build on past progress and to continue to strive for excellence.

It must be noted that while this paper attempts to identify some of the main strategic considerations, it does not claim to have identified all factors that will impact British Columbia's performance. It is intended, however, to help British Columbians think about the province's future and how individual contributions can assist in dealing with the critical issues and trends of our time. From today's perspective, it is hard to determine with any degree of precision the magnitude of change British Columbia will face or the nature of our economy and society as the province moves into the second decade of this millennium and beyond. Yet, some strategic considerations for BC's future can be predicted with a reasonable degree of certainty, and the main ones are briefly summarized below:

- ***BC's population will continue to age***, with the median age rising to 46.2 years by 2031 from 39.8 in 2006. By 2031 those aged 65+ will increase to 24.2 percent of the population in 2031 from 14.0 percent in 2006.
- ***BC's population growth*** will be concentrated in areas of the province that are already relatively dense: Greater Vancouver, Victoria, Nanaimo, Fraser Valley, Cowichan Valley and Central Okanagan.
- BC's ***Aboriginal population*** will experience growth to 219,400 by 2017, from 193,100 in 2006, or a 13.6 percent increase. The increase will be most pronounced in young people and in the under 30 work force.
- An ageing population will eventually impact ***labour force growth*** negatively, shrinking the number of workers relative to dependants which could decrease both economic growth and tax revenue in the absence of productivity improvements.
- Current and future ***immigrants*** are increasingly from Asia, and the lag time before immigrants have fully integrated into the provincial workforce has increased over the past 20 years. A "go forward" challenge will be ensuring that immigrant economic, education, and social transitions are facilitated as smoothly as possible.
- ***BC's economy*** will likely continue to be strong for the next five years, with real GDP per capita growing above the national average, while the unemployment rate will remain under 5 percent, or basically at full employment.
- ***Beyond 2011***, BC's ***economic performance*** will be shaped by a number of factors including: the extent to which productivity growth occurs; the performance of traditional "price taker" industries in the natural resource sector; and, the degree to which the provincial economy diversifies beyond its traditional commodity base.
- ***Border security*** will remain important in the wake of the 9/11 terrorist attacks. This implies that Canada and BC must strive for the most secure entry points possible, while considering further security integration with the United States. At stake is whether Canada and BC are part of a "fortress North America" or whether the United States goes it alone as "fortress America". Significant commercial relations are at stake for BC if security issues are not sufficiently addressed.
- The ***energy sector*** will continue to underpin the BC economy through to 2020, and represents the largest upside opportunity to provide relief to the Central Interior economy in the aftermath of the mountain pine beetle epidemic (post 2012) and associated decline following the harvesting of beetle-kill wood.

- BC faces a very steep challenge with securing ***electricity supply*** over the next couple of decades, demanding new capacity and a sharp focus on conservation. Transmission capacity will also have to be renewed and expanded.
- A growing population and economy will require further strategic improvements in ***transportation*** planning and development throughout the province (air, road, rail, marine), but especially in the Lower Mainland to ease value-destroying bottlenecks, to increase fluidity of supply chains, and to provide increased options for people movement.
- Competitive economies of the next few decades will be underpinned to a considerable extent by ***"City States"*** in many instances. This implies that the Lower Mainland will need to cooperate much more closely to increase regional competitiveness, especially with respect to the critical factors and activities that underpin economic development activities.
- BC's ***productivity*** and ***information and communications technology*** gaps with Canada and the United States should continue to close, but concerted efforts will be required to realize significant gains in this area.
- BC's ***research and development*** spending and "footprint" will continue to increase – albeit modestly – during the decade to come.
- BC's ***education system*** is of high quality, but continues to face challenges on a number of fronts, including: focussing additional efforts on costly – yet critical – early childhood education programs; continuing efforts to improve the high school completion rate from its current level of 79 percent; and furthering efforts to raise the level of adult literacy.
- Further efforts will be required to close ***educational outcome*** gaps between the ***Aboriginal and general population*** on high school completion, among other key measures.
- ***Skilled worker shortages*** will persist well into the next decade as the labour market ages and the baby boom generation reaches retirement age.
- Part and parcel of efforts to build an innovative economy will be whether BC "closes the gap" with other provinces in relation to the number of ***graduate students*** enrolled at post-secondary institutions.
- BC will likely continue to be a national leader on comparable measures of ***environmental outcomes***.
- ***Climate change*** is likely to persist as a critical provincial, national and global issue which will result in efforts to reduce greenhouse gas emissions over the short to medium term. It is imperative that British Columbia does so in a measured, balanced and economically sensitive fashion.

- The relative ***scarcity of land*** for commercial and residential development within the Greater Vancouver Regional District will require: increased efforts to build more compact urban forms; greater cooperation in land use and transportation planning among municipalities; and, overall balancing of economic growth and environmental impacts.
- As population growth in urban and regional British Columbia continues, ***water quality and quantity*** will increasingly be an issue. Similar to transportation and energy, questions about water sustainability will give rise to greater use of demand management techniques (i.e. conservation and regulation) to ensure both sufficient quality and quantity. BC must also ready itself for the prospect of the overdue "100 year flood" in the Fraser Valley.
- BC will likely continue to post top ranks in key ***health outcomes*** over the next decade. While not assured, there is no reason to believe there will be a dramatic alteration of BC's leading pattern on key indicators such as life expectancy, cancer mortality, cardio-vascular mortality, infant mortality and potential years of life lost.
- ***Health care and costs*** will continue to be critical issues for BC and other provinces in the coming decade. The question of sustainability of the system driven by population ageing, escalating technology costs, together with increased utilization of services underscores the need for prevention, healthy living and other individual efforts to reduce system costs and improve health outcomes. Here, the primary – though not exclusive – focus should be on continuing to reduce the incidence of smoking, overweight, and obesity in the population.
- Further efforts to close gaps between ***Aboriginal and general population health outcomes*** will be required in the decade to come.
- As a small, open, jurisdiction, BC must prepare for and to the greatest extent possible guard against ***pandemic and infectious diseases***. The potential for significant economic and social disruption is significant, given our globally oriented economy and society.
- ***Immigration*** – particularly from Asia – will continue to underpin a significant portion of population and labour market growth in the decade to come. A key challenge for BC is to improve the 'earnings gap' of recent immigrants, together with finding ways to ease transitions into the labour market.
- Current trends indicate that there is room to improve BC's ***volunteer, donation and voter participation*** rates. Democratic participation and an active citizenry are critical precursors for a civil society.
- Though BC's ***crime rates*** have generally been improving, BC's rates continue to be higher in many categories than other provinces. BC's higher use of illicit drugs

relative to other provinces and their strong connection to crime and criminality will require concerted effort and attention by government, community interests and individual citizens over the next decade.

- Standard indicators of ***low income incidence*** and poverty suggest that BC's relative position has been improving relative to other provinces, though it remains near the bottom of inter-provincial rankings in most recent available data. Efforts to monitor and address low income incidence and find innovative ways to assist those in strained circumstances must be an ongoing focus of government, community interests, and individual citizens.

Appendices

A. Board Members, Staff, and Advisory Group Members

Board Members and Staff

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(Vacant), Chair

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Ms. Eva Lee Kwok
Chair & CEO
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Former President & Vice-Chancellor
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Telus Professor of Economics
Simon Fraser University

Mr. Stuart Mackay
President
MMK Consulting

B. Notes

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