



Business Council of
British Columbia

OUTLOOK 2020:

SHAPING B.C.'S ECONOMIC FUTURE



APRIL 2010



Business Council of
British Columbia

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OUTLOOK 2020: SHAPING BRITISH COLUMBIA'S ECONOMIC FUTURE¹

I. INTRODUCTION

Almost two years ago, the Business Council of British Columbia launched an ambitious project under the banner of *Outlook 2020*. The objective was to help shape a realistic vision and agenda for BC's economic future, with a particular focus on the post-Olympic decade. Not long after the project began, the world economy was rocked by an unprecedented financial crisis that evolved into the first full-scale global recession in six decades. This 'Great Recession' has left a painful legacy of high unemployment, excess industrial capacity, diminished trade flows, and weakened government finances. While Canada emerged from the turmoil in better shape than many others, no part of the country managed to escape the carnage.

Thus, the British Columbia economy, like Canada's, stalled over the second half of 2008, and then tipped into recession. This led to a rapid-fire doubling of the unemployment rate, accompanied by sharp contractions in exports, housing starts, and retail sales. Fortunately, the economy stabilized late last year and now seems to be on the mend, with output likely to expand by around 3% in 2010, after shrinking by an estimated 2.5% in 2009. Most forecasters believe BC will be one of the Canadian growth leaders over the next two years.

That said, the 'new normal' will differ from what the province experienced over the previous decade. Among other things, Americans are likely to be less enthusiastic consumers of Canadian products, as US households repair their balance sheets and adjust

¹ Written by Jock Finlayson and Ken Peacock, who alone are responsible for the information presented and the opinions expressed.



to an estimated \$12 trillion decline in net worth. Emerging markets, on the other hand, will be responsible for a bigger share of global consumption and trade. Closer to home, another legacy of the recession is that governments will be grappling with multi-year deficits after posting budget surpluses for several years prior to 2008-09. Both at the national level and here in BC, governments are likely to lack the resources to mount significant new initiatives and may struggle to fund existing programs.

As the research for *Outlook 2020* got underway, it became apparent that a handful of key themes would help to define the project – notably, the roles of talent, technology and trade in establishing the underpinnings of prosperity in a small, open economy. A related theme also quickly came to the fore: the critical importance of British Columbia's 'export base' – the sectors and activities that lead to inflows of income from outside jurisdictions. The 'export base' encompasses not just trade in goods and services, but also external investments that support research and the development of emerging industries. As discussed in section III, British Columbia's economic performance has been hampered by a mediocre export record and limited success in building clusters of competitive traded industries. Without healthy and expanding traded industries, it is difficult for a small economy to raise incomes and living standards on a sustained basis.

Outlook 2020 has been guided by three fundamental questions:

- 1) What are the most important external and internal trends that will define the economic environment for British Columbia in the next decade?
- 2) How can the province continue to prosper in an increasingly competitive and knowledge-based global economy?
- 3) What steps can be taken to improve upon current policies, institutions, attitudes, and practices to strengthen the foundations for economic success?

At the heart of *Outlook 2020* is a series of papers that explore topics relevant to the province's economic future. Most of these were developed by outside researchers, in some cases in partnership with other organizations. A few were written by Business Council



staff. In all, 28 papers were commissioned for the project. Several are referenced in this report. All of them are posted on the Council's web site (www.bcbc.com)

The background papers and other related research done for the project set the stage for a series of half-day policy conferences to discuss the province's economic future; the first three were held over the second half of 2009, while the final wrap-up conference took place on April 23, 2010.

This report is a synthesis of the learnings from *Outlook 2020*. It is not a summary of the background papers, conference presentations or related discussions. Nor does it necessarily reflect the official policy of the Business Council or its members. Rather, it represents the authors' attempt to distil what we judge to be the principal insights from the project, and to outline a number of strategic directions that British Columbia can take to bolster its economic prosperity in the post-Olympic decade that is now just beginning. Responsibility for the contents of the paper, in its present form, rests with the authors, Jock Finlayson and Ken Peacock.

Vision 2020

At the outset it may be useful to describe where we think the province is heading. A broad vision statement can create a mental picture or goal and begin to define where BC fits in the wider world. Put succinctly, we see British Columbia becoming an increasingly innovative, knowledge-based economy that aims to maximize the value of its natural resource endowments and solidify its position as a primary Gateway connecting North America to the rapidly growing Asia Pacific region.

There are four desired hallmarks of the British Columbia economy that we envisage for 2020:

- 1) It is **open and connected to the world**, in terms of trade and investment, as well as the transportation and communications linkages necessary to support the province's role as a Gateway economy with a sizable tourism sector.



- 2) It is a **successful exporter**, with more enterprises engaged in trade across a spectrum of goods- and service-producing industries.
- 3) It is an **innovation-led economy**, as reflected in the behavior and strategies of firms and institutions in the public and private sectors.
- 4) It is recognized as a **leader in combining smart environmental and energy practices**.

Based on the work done for *Outlook 2020*, it is clear that a successful knowledge economy requires investments in human capital, innovation and the commercialization of new ideas, a vibrant and robust technology sector, and an inclination to apply new technologies and processes across all industries. Maximizing the benefits of BC’s natural resource wealth speaks to the continued importance of resource-based industries to the province’s economic well-being. British Columbia is already known as Canada’s Asia Pacific Gateway. As trade and other connections with Asian markets continue to expand and diversify, it will be necessary to secure the province’s position as a key link between Asia and North America. In addition to trade flows and the movement of goods and people, there may be an opportunity to build on the Gateway notion by making BC an attractive ‘landing pad’ for the Asia Pacific – a business hub for the region, and a place where Asian companies choose to establish a presence in North America. Another dimension of delivering on a broad Gateway vision is ensuring appropriate investments in energy and communications infrastructure to enable the province to connect with export markets to the south, as well as in Asia. One way to describe the vision we have in mind is that British Columbia would evolve toward becoming a ‘Singapore with resources.’ A snapshot of Singapore’s economic strategy is provided on page 6.

Box 1 lists a number of economic metrics which the BC Progress

Box 1	
Where BC Ranks	
Real GDP per person	5 th in Canada; 51 st in NA
Employment rate (among 15-64 age group)	4 th in Canada
Productivity	6 th in Canada
Business non-residential investment as % of GDP	5 th in Canada
Value of exports per capita	8 th in Canada
University completion (share of 25-54 age group)	2 nd in Canada
R&D spending as % of GDP	5 th in Canada; 37 th in NA

Source: BC Progress Board.



Board uses to chart the province's performance over time. Most of these show where BC ranks within Canada, although for two measures there is also information on its standing relative to all provinces and American states for which data are available. BC Progress Board benchmarking has painted a fairly consistent picture: in a comparative context, British Columbia scores well on measures relating to health outcomes, environmental quality, and some aspects of education and human capital; is a middling performer on most indicators of economic well-being; and has a very mixed record on metrics that gauge social condition. The Business Council's **Outlook 2020** project

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has focused on the determinants of economic prosperity, while recognizing that the quality of life enjoyed by citizens is far from being fully captured by economic data alone. Nonetheless, with an effective economic strategy in place, BC's ranking on at least some of the individual metrics identified in Box 1 would be expected to improve over time.

Finally, we reiterate the point that this synthesis paper is not a complete compendium of Business Council proposals to shape public policies or private actions to maintain a prosperous and competitive economy. Over the balance of 2010, the Business Council will digest and consider the extensive data, information and ideas developed through **Outlook 2020** as we work toward finalizing a preferred medium-term economic strategy.

We begin, in section II, with a review of some trends that are recasting the economic landscape for British Columbia. Section III takes a closer look at the commercial and industrial foundations of BC's economy. Section IV discusses some the broad elements of a 2020 Prosperity Agenda emerging from the work done for **Outlook 2020**. The final section offers brief concluding comments.



SINGAPORE

Singapore is an important hub for the South-East Asian region. Over the past few decades, the small city-state has enjoyed remarkably strong growth so that today its per capita GDP is comparable to levels of advanced nations. It has a dynamic economy that consistently ranks as a leading jurisdiction for international business. Its airport, port and road systems are among the best in the world.

With a population of 4.8 million, Singapore is slightly larger than BC. It has built its success through access and connections to external markets and suppliers. Openness and free trade along with explicit economic development policies have been instrumental in Singapore's enviable economic performance. The Government continues to pursue an outward-looking, export-oriented economic policy that encourages two-way flows of trade and investment.

The Economic Development Board (EDB) has played a significant role in the evolution of Singapore's economy. Formed in 1961, it has guided Singapore's industrialization. Early emphasis was placed on promoting investment in manufacturing, notably the electronics segment. Chemicals, including petroleum refining, have also been an important part of the country's development. A 1991 Strategic Economic Plan (SEP) saw the Government step up investment in education and human resources to enhance competitiveness and encourage the development of new export industries.

In response to growing competition from other parts of Asia in key manufacturing sectors, in the late 1990s the Government adopted policies to diversify Singapore's economy. It shifted attention to becoming Asia's premier knowledge-based and high-tech hub. This included expanding research capacity and adopting a plan to develop a world-class biotech sector anchored by Singapore's existing success in pharmaceutical manufacturing. Engineering, finance and transportation and logistics have also evolved to become sizable industry clusters.

Singapore's globalization strategy hinges on making a transformation from a production-driven economy to an innovation-driven one. A prime objective has been to position the country as a regional hub and pacesetter in economic development and reform. The Government continues to promote Singapore's position as a hub for education, finance and transport services. Emphasis on developing the service sector has been supported by the Operational Headquarters (OHQ) program, which encourages companies to use Singapore as a regional headquarters or as a central distribution center. The Creative Business Program promotes investment in the film, media, and publishing, arts and entertainment, textile, fashion and design sectors.

Singapore continues to refine its development strategy to compete in today's interconnected world. In May 2009, Prime Minister Lee Hsien Loong announced the formation of the Economic Strategies Committee (ESC), "to develop strategies for Singapore to build capabilities and maximise opportunities as a global city in a new world environment, so as to achieve sustained and inclusive growth."

The Economic Strategy Committee's final report (February 1, 2010) is built around the following goal:

High-skilled people, innovative economy, distinctive global city.

We must make skills, innovation and productivity the basis for sustaining Singapore's economic growth. This will also provide for inclusive growth, with a broad-based increase in the incomes of our citizens.

We must also be a vibrant and distinctive global city – open and diverse, the best place to grow and reach out to a rising Asia, and a home that provides an outstanding quality of life for our people.

The Committee envisions seven key strategies as providing the foundation for Singapore's success in the coming years:

- Growing through Skills and Innovation
- Anchor Singapore as a Global-Asia Hub
- Build a Vibrant and Diverse Corporate Ecosystem
- Make Innovation Pervasive, and Strengthen Commercialization of R&D
- Become a Smart Energy Economy
- Enhance Land Productivity to Secure Future Growth
- Build a Distinctive Global City and an Endearing Home



II. A SHIFTING ECONOMIC LANDSCAPE

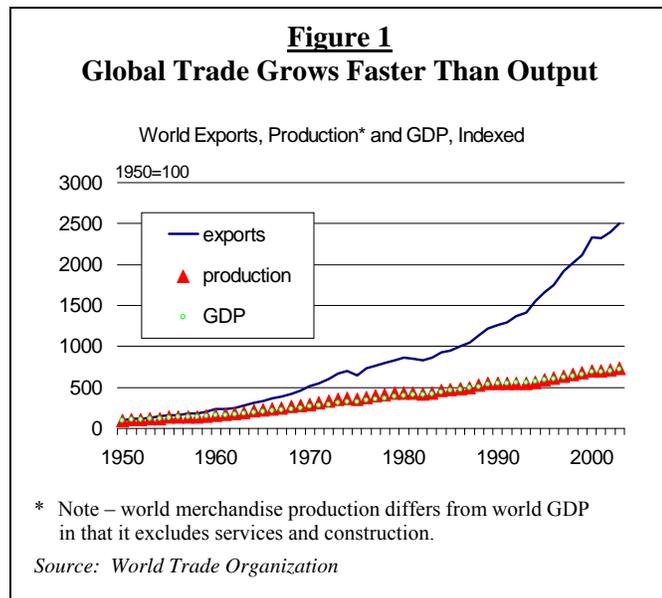
Outlook 2020 has put the spotlight on a number of trends that promise to shape the context for economic development in British Columbia over the coming decade. Most of these are global in scope; some are playing out in particularly visible ways within the province.

Globalization

Although there is no agreed definition of the much-used term ‘globalization,’ in essence it refers to two related developments: 1) the steady growth of international flows of goods, services, capital, and knowledge; and 2) the reduction, over time, of barriers to cross-border business. Until the recent world slump, trade had been increasing much faster than global output – a pattern that persisted from 1950 through most of the 2000s (see Figure 1). As a result, trade in goods and services and other forms of international commerce – such as foreign direct investment – have been looming larger within many national and regional economies. This trend is expected to resume as the world recovers from the ‘Great Recession.’

Today, markets for goods, services, capital and knowledge are tightly interconnected and operate 24/7. Advances in communications and transportation technologies have

lowered the cost of cross-border business, widened the range of goods and services that can be traded internationally, and produced an explosion in the information available to businesses and households. National and sub-national boundaries are becoming less significant in defining the markets for many types of economic activity. Supply chains in a growing number of sectors are now international in scope. Of interest, in recent years Canadian businesses have stepped up participation in global supply chains involving Asia,





Europe and South America – while their engagement with North American supply chains appears to have stagnated.² This may reflect the ‘thickening’ of the Canada-US border since 2001. It also hints at the onset of diminishing returns from North American economic

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integration, some 15 years after the implementation of NAFTA.

Globalization and the restructuring of international production are altering the economic picture for many nations and regions. These trends have spawned dense

commercial systems, but the latter are not always in equilibrium. Indeed, as the world recently witnessed, while cross-border markets and commercial exchanges are powerful sources of economic progress, they are also prone to instability, with feedback loops that can fuel both bubbles and crunches and quickly transmit disturbances. Even well-managed economies can be hit by destabilizing global forces.

With globalization, the competitive pressures facing local firms and workers have intensified. But globalization also means greater scope for British Columbians to reap economic rewards by exporting goods and services, attracting international visitors, linking up with global supply chains, tapping external capital and knowledge, and accessing inputs from abroad. International commerce is not a zero-sum game. Countries and regions do not compete in the same way as companies do. Instead, they provide markets for each other's traded goods, services, capital, and tourists. Economic growth abroad normally means bigger, more affluent markets into which our own enterprises can sell – and profitably invest. In short, while globalization and open markets aren't without their downsides, the growth and dynamism which they bring create new economic opportunities for many nations.³

² Conference Board of Canada, Stuck in Neutral: Canada's Engagement in Regional and Global Supply Chains (May 2008).

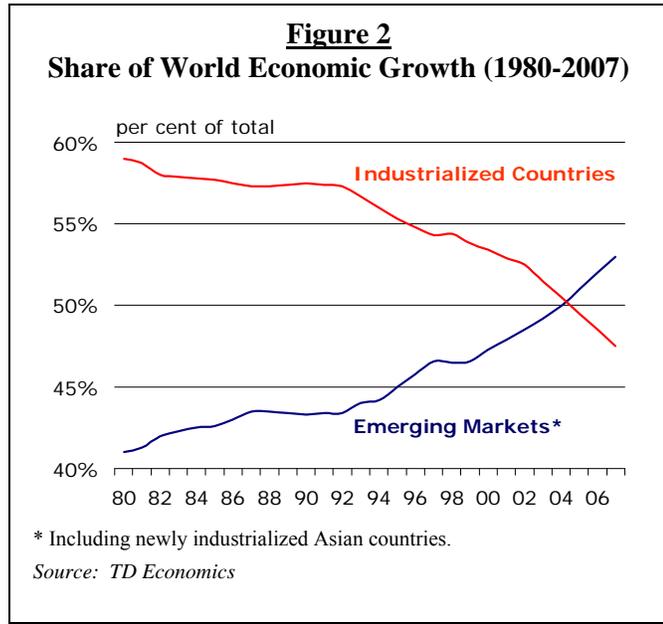
³ Paul Krugman, “Making Sense of the Competitiveness Debate,” Oxford Review of Economic Policy, volume 12 (Autumn 1996).



Emerging Markets – Emerging No More

Since 2000 the growth of the global economy has been driven by emerging markets, especially those in Asia. As the world moves past the ‘Great Recession,’ China, India, Indonesia, Brazil, Korea, and other emerging economies will again be primary contributors to the recovery. This year China is set to supplant Japan as the world’s second biggest economy, having previously eclipsed Germany as the number one exporter. By 2020, Asia as a whole is expected to produce close to 45% of world output, up from approximately 35% today.⁴ The *Outlook 2020* paper by Professor Rosalie Tung discusses Asia’s global rise and some of the implications for British Columbia.⁵

Relatively healthy macro-economic fundamentals and steadily increasing per capita incomes in many emerging markets are transforming the global pecking order. By 2020 developing countries are expected to be home to fully half of the world’s ‘middle class’ population, double



Box 2
China Counts for More in the Global Picture

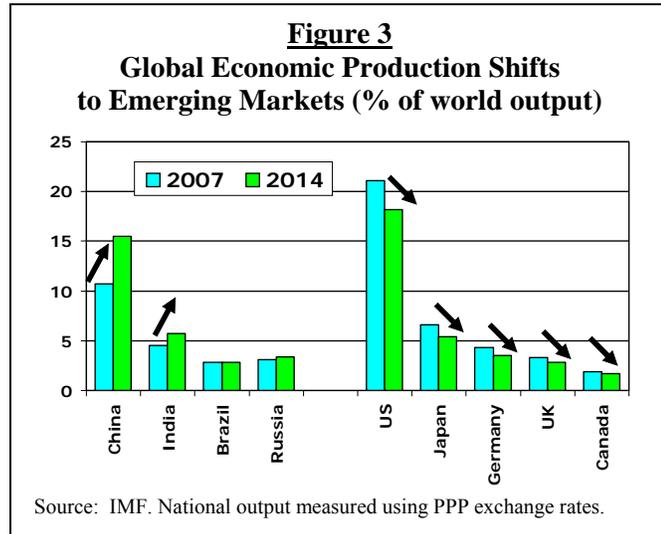
- The world’s #1 exporter
- Also accounts for 12-15% of global imports
- Set to overtake Japan as the world’s second biggest economy in 2010
- Largest foreign currency reserves of any country
- In most years, China is #1 destination for inbound direct foreign investment
- Also the biggest global consumer of steel, copper, cement, iron ore, aluminum, etc.
- In 2009, China eclipsed the US as the world’s largest market for new vehicle sales
- Now the world’s biggest source of greenhouse gas emissions

⁴ Measured on a purchasing power parity basis.

⁵ Rosalie Tung, “The Rise of Asia: Opportunities and Challenges for British Columbia,” report prepared for the Business Council of British Columbia (2009). Available at www.bcbc.com.



their share in 2008.⁶ Within a decade, China's consumers could have more aggregate buying power than America's. From a shorter-term perspective, a new International Monetary Fund report observes that in the next few years, "consumption in the G-7 economies is unlikely to be the engine that revives global growth."⁷ Fortunately, emerging economies will step forward, powering the growth of world-wide demand for energy, food-stuffs, metals, and other industrial raw materials. They are also expected to be big buyers of sophisticated capital goods, 'clean energy' technologies, education, and a host of high-end producer services. It is important to note that British Columbia has established commercial strengths in many of these areas.



Science, Technology and Innovation

The pace of scientific and technical change is accelerating. From health care to manufacturing to environmental remediation, the development and application of new knowledge generated by science and technology is redefining the way business is done. This has profound implications for the ability of countries, regions and even cities to prosper. "Strength and leadership in science, technology and innovation is the price of entry to full participation in the knowledge-based global economy of the 21st century."⁸ Advances in these fields are creating new markets for goods and services, blurring distinctions between industries, reshaping business models, and altering patterns of competitive advantage. For small economies like BC, strength in science and technology is

⁶ H. Karas, "The Emerging Middle Class in Developing Countries," OECD Development Centre, Working Paper No. 285 (January 2010).

⁷ A. Mody and F. Ohnsorge, "After the Crisis: Lower Consumption Growth but Narrower Global Imbalances?" IMF Working Paper WP 10/11 (January 2010).

⁸ Science, Technology and Innovation Council, State of the Nation 2008, Ottawa (2009), p. 5.



becoming crucial to competitiveness. This insight is borne out in a number of the papers developed for *Outlook 2020*.

Science and technology are closely linked to innovation in many policy discussions. Innovation involves new or better ways of doing things that have economic value. Science and technology that stays in the lab may expand the stock of human knowledge, but only when it moves into the commercial world is it likely to produce significant economic benefits. Innovation is a critical component of developing competitive products and services for export, and of becoming a leader in smart environmental and energy practices.

From a quantitative perspective, a jurisdiction's innovation performance can be assessed along three dimensions:⁹

- *Inputs*, like research and development activity, investment in advanced technologies and equipment, and the proportion of the workforce consisting of scientists, engineers and technologists.¹⁰
- *Outputs*, such as the proportion of business sector revenues derived from products/services introduced with the past 3-4 years.
- *Outcomes* – for example, a region's market share in technologically sophisticated industry sectors, the growth of locally-based innovative firms with a global presence, etc.

For small economies like BC, strength in science and technology is becoming crucial to competitiveness.

Most studies categorize Canada as a mid-level innovation nation based on the types of measures referenced above. The weakness in

Canadian innovation is concentrated in the business sector. Among the provinces, only Ontario and Quebec match the OECD average on overall business R&D intensity. These provinces also generally do better than the rest of Canada on measures of business

⁹ Expert Panel on Business Innovation, Council of Canadian Academies, Innovation and Business Strategy: Why Canada Falls Short, Summary Report (April 2009), p. 7.

¹⁰ Some studies identify the proportion of workers with graduate-level degrees as an important aspect of innovation performance.



investment in machinery, equipment and advanced technologies. Some analysts point to difficulties in the financing of innovative firms as a factor impeding the growth of private sector innovation in Canada.

Importantly, innovation is not limited to science, nor does it always entail research and development or visible advances in technology (albeit such advances are crucial to much innovation). As the Council of Canadian Academies' Expert Panel of Innovation noted in its landmark 2009 report, "Innovation...is the manifestation of creativity, the uniquely human capacity to transform the imagined into the real." Innovation matters to society, "because it is the means by which problems are solved and new opportunities are created."¹¹ Understood this way, innovation shades into the concept of 'creativity' that has recently captured the attention of many analysts. Creativity is the production of new ideas that are fit for a particular economic or business purpose. This is a fundamental aspect of innovation, as that term is usually defined. From the perspective of the macro-economy, the challenge is less to speed the growth of 'creative industries' than it is to stimulate all industries to be creative. That said, British Columbia has proven to be a fertile environment for the formation and growth of 'creative industries,' as documented in an *Outlook 2020* paper authored by PricewaterhouseCoopers. According to that paper, the 'creative sector' is made up of a collection of sub-industries which together represent almost 3% of the province's GDP and directly support 85,000 jobs.¹² The sector, which benefits from the high proportion of 'creative' people in BC, looks poised for solid growth in the decade ahead.

'Clean and Green'

How countries respond to climate change and the challenge of shifting, over time, to a low-carbon economy will help to shape their future economic development. Some jurisdictions,

¹¹ Expert Panel on Business Innovation, *Summary Report*, op. cit., p. 3.

¹² Pricewaterhouse Coopers, "Opportunity BC 2020: Creative Sector," report prepared for the Business Council of British Columbia (2009). Available at: www.bcbc.com. The report identifies the following sub-industries as components of the broad creative sector: film and television production; sound recording; performing arts and heritage institutions; design; new media (including video games, software and internet-based entertainment; advertising; radio and television broadcasting; and print publishing.



including BC, are seeking aggressively to develop industrial platforms tailored to a low-carbon future. However, the task is complicated by the costs involved, slow progress in establishing international regulatory structures, the non-trivial risk of 'carbon leakage' for early movers, and business and investor uncertainty as a plethora of countries, states and provinces chart their own paths on climate policy.

British Columbia stands out both for the scale of its energy resources and for its strengths in several of the technologies grouped under the heading of 'clean tech.'¹³ The *Outlook 2020* paper on the future of BC's electricity sector authored by David Molinski, speaks of "realizing British Columbia's second renewable electricity revolution."¹⁴ A separate *Outlook 2020* discussion paper, on the province's advanced technology sector, notes that "[e]nvironmental consciousness and the impact of global warming will drive the accelerated adoption of clean energy technologies," adding that 'clean tech' may become "the next growth catalyst for the technology industry, similar to the internet and mobile communications late in the 20th century."¹⁵

Yet it is wise to maintain a sense of perspective. British Columbia is a tiny economy with an existing industrial structure and export base heavily tilted toward the production of resources – including fossil fuels – and traded manufactured goods. The province boasts an abundance of energy resources, including growing reserves of natural gas. British Columbia also has large Gateway and other transportation industries and a geography and climate that result in substantial use of fossil fuels. Realizing the goal of a 'clean and green' economy has to be reconciled with the province's existing portfolio of energy assets and actual sources of comparative advantage, as well as its diverse regions, varied climate and scattered population. In terms of factors such as export structure, mix of domestic energy assets, and basic geography, the truth is that BC has little in common with

¹³ BC CleanTech CEO Alliance, "A 2020 Vision for Building a Clean Energy Powerhouse in British Columbia" (October 2009).

¹⁴ OnPoint Consulting Inc., "Realizing British Columbia's Second Renewable Electricity Revolution," report prepared for the Business Council of British Columbia (2010). Available at: www.bcbc.com.

¹⁵ BC Technology Industry Association, "BC's Advanced Technology Sector: Reaching for the Next Level," report prepared for the Business Council of British Columbia (2009), p. 6. Available at: www.bcbc.com.



Denmark, Germany, California, or Spain – jurisdictions that are often viewed as leaders in developing ‘clean’ energy.

Nonetheless, the reality is that many countries are moving to stimulate investment in advanced energy technologies as a way to mitigate carbon emissions and spur new industrial growth. At the global level, markets are developing rapidly for products and technologies that reduce the environmental footprint of economic activity. Last year China invested more in clean energy technologies than Canada and the United States combined.¹⁶ According to a new US study, global investment in renewable energy markets will reach \$106-230 billion per year by 2020. Meanwhile, the amount of capital invested in energy efficiency

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improvements is expected to skyrocket over the same period. If a critical mass of nations take coordinated action on climate change in the near future (admittedly a very uncertain prospect), cumulative global investment in clean power generation technologies could reach \$2.2 trillion by 2020.¹⁷ A recent Conference Board of Canada report estimates that international trade in ‘climate-friendly’ technologies already accounts for 2% of the value of world imports.¹⁸

Interest in ‘clean’ technologies and in environmental issues generally does not just derive from concerns over climate change; it also reflects a societal push toward more sustainable business practices and ongoing efforts to minimize harmful pollution of all types. Today, most industries operating in advanced economies are under constant pressure from regulators, suppliers and customers to improve their environmental performance. A similar trend is evident in some developing countries, especially those at or on the cusp of

¹⁶ Pew Center for Global Climate Change, Clean Energy Markets: Jobs and Opportunities (February 2010).

¹⁷ Ibid.

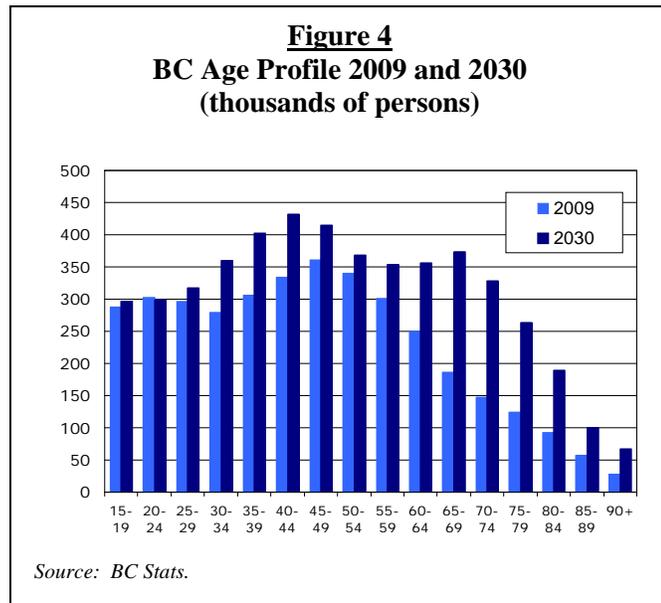
¹⁸ Conference Board of Canada, Global Climate-Friendly Trade: Canada’s Chance to Clean Up (March 2010), p. 6. The figure excludes trade in resources and agricultural products.



attaining ‘middle-income’ status. So there can be no doubt that global demand for ‘green’ products, ‘clean’ technologies, and environmental expertise of all kinds will be growing robustly in the decade ahead. This suggests that BC should aim to leverage its specific energy and technology assets to become a more significant producer and exporter of low-carbon energy – both renewable power and natural gas – and related technologies and services.

Demographic Change: Population Aging and Immigration

Virtually all OECD jurisdictions (and some emerging market economies, like China) are confronted by both aging populations and a downshifting in projected labour force growth rates. The issues this will present for British Columbia are addressed in separate *Outlook 2020* background papers by David Baxter, Roslyn Kunin and Jock Finlayson/Ken Peacock.¹⁹ The consequences of demographic aging will be most pronounced after 2020, but aging’s impact – on our economy, society, and public services – will be felt within the next decade. Sustained upward pressure on the cost of health



care and pensions is certain, putting strain on already stretched government budgets. And as the current economic recovery gains traction, worries about labour and skill shortages are sure to re-emerge. As one Canadian commentator recently observed, “[w]hile today’s

¹⁹ David Baxter, Andrew Ramlo and Erin Ramlo, “Changing People, Changing Places: Demographic and Economic Change in British Columbia,” report prepared for the Business Council of British Columbia (2009). Dr. R. Kunin, “Population Aging: Economic and Fiscal Implications,” report prepared for the Business Council of British Columbia (2009). Jock Finlayson and Ken Peacock, “BC’s Labour Force to 2020: Projections and Implications,” report prepared for the Business Council of British Columbia. All available at: www.bcbc.com.



focus is on unemployment, the issue in the medium-term will not be a jobless recovery but a workerless expansion.”²⁰

Although aging by definition happens gradually, in fact BC is not far from the ‘tipping point’ in terms of the overall age structure. Consider the following statistics. In 1971, the ‘elderly’ (aged 65 and over) accounted for 9.3% of the population. By 2007, their share had risen to 14%. According to BC Stats, ‘seniors’ will make up almost one quarter of the population by 2030. And within a decade, fully one in five British Columbians will be 65 or older. In contrast, the proportion of BC’s population under the age of 15 has been shrinking, dropping from 27.6% in 1971 to 15.7% by 2007, while the proportion between 15 and 24 fell from 18.1% to 13.6% over the same period. By 2030 these shares are expected to decline further, to 12.9% and 10.1%, respectively.

In short, in the not too distant future, the province will have more ‘seniors’ than people under age 25. For our economy and society, this represents nothing less than a tectonic demographic shift, one that promises to have a major impact on the labour market and on patterns of consumption of both publicly funded and privately produced goods and services.

An aging population and slower labour force growth also underscore the imperative of improved productivity. Without gains in productivity – the value of output per hour worked – the outlook for future increases in real incomes is grim. Unfortunately, this is an area where BC trails peer jurisdictions. The urgent need to boost productivity provides strong justification for the provincial government’s recent decision to implement a harmonized sales tax.²¹ Increasing productivity should figure prominently in any post-Olympic economic strategy for British Columbia.

²⁰ Kevin Lynch, “The Global Drivers of Change,” *Policy Options* (December 2009-January 2010), p. 76.

²¹ Dr. Jack Mintz, *British Columbia’s Harmonized Sales Tax: A Giant Leap in the Province’s Competitiveness* (University of Calgary, School of Public Policy, March 2010).



A related demographic trend of great relevance to BC is immigration. Along with Australia, Canada leads the world in immigration, measured as the inflow of newcomers as a share of the existing population. British Columbia is the destination chosen by 15-20% of the immigrants arriving in Canada each year. In the next decade, immigration is projected to account for the lion's share of the cumulative growth in BC's workforce and population. By 2020, almost half of all Lower Mainland residents will be foreign-born; for the province as a whole, the figure is likely to approach one-third. The source countries of immigrants have shifted over time, with most newcomers to BC now coming from Asia (especially China, India, Korean, and the Philippines), followed by Europe and Latin America. With different source countries, issues related to the educational credentials and work experience of new immigrants have emerged as important factors affecting their employment prospects.

As immigrants become a bigger force in our economy and society, institutions in both the public and the private sectors will be under pressure to respond – by updating organizational human resource practices, removing barriers to immigrants' full participation in the job market, tapping their experience to help local companies do business abroad, and ensuring that public services recognize their specific needs. The employer community needs to be working with governments, educational institutions and the non-profit sector to help ensure that British Columbia is a welcoming environment for new immigrants and is able to take advantage of the skills and entrepreneurial drive that they bring.

Urbanization

Another slow-moving trend with big economic and social consequences is urbanization. By 2007, half of the world's population was officially categorized as 'urban.' In Canada, the proportion of urban-dwellers is significantly higher. In BC, as in much of North America, the share of the population residing in major urban centres has risen steadily. In



1986, 63% of British Columbians lived in one of the province's four big metropolitan areas (Vancouver, Abbotsford, Kelowna and Victoria).²² By 2009 the figure had climbed to 68%, as the population grew more quickly in metros than in other parts of the province. Over the 1986-2009 period, the populations of Kelowna and Abbotsford nearly doubled and Metro Vancouver's rose by 60%, whereas outside of the four metro areas the population increased by only 28%. There is little reason to believe this picture is about to change. BC Stats' projections indicate that over the next decade, the population of BC's main metros (except Victoria) will jump by nearly one-fifth, while elsewhere population growth will be a modest 9%. As a result, by 2020 close 70% of all British Columbians will live in the four large urban centres.

In the BC context, the economic place and contributions of Metro Vancouver warrant specific mention. Home to more than half of the province's population, Metro Vancouver is at the heart of the shift to a more diverse and outward-looking BC economy – a theme of the *Outlook 2020* paper authored by the Vancouver Economic Development Commission.²³ Recent Canadian research shows that 'urban agglomeration' (measured in terms of access to talent, buyer-supplier networks, and knowledge transfer) is a key factor stimulating productivity and output growth.²⁴ As the Conference Board observed in its 2007 Canada Project report, cities are becoming more important as "...the centres of the knowledge economy; the generators of extensive environmental activity; and the sites of profound social change."²⁵ Globally, the biggest 'city-regions' are strongly conditioning the competitive dynamic among countries and regions striving to develop competitive industry clusters and attract and retain high-value economic activities.

One reason why large metropolitan areas are powerful economic engines is the demonstrated tendency for many kinds of high-value economic activity – especially in

²² Census metropolitan areas as defined by Statistics Canada.

²³ Vancouver Economic Development Commission, "Metro Vancouver as a Global City-Region," report prepared for the Business Council of British Columbia (2010). Available at: www.bcbc.com.

²⁴ John Baldwin, Desmond Beckstead, W. Mark Brown, and David Rigby, *Urban Economies and Productivity*, Statistics Canada (June 2007).

²⁵ Conference Board of Canada, *Mission Possible: Sustainable Prosperity for Canada, The Canada Project Final Report, Volume IV* (Ottawa: Conference Board, 2007), p. 32.



advanced technology industries and knowledge-based services – to ‘cluster’ in particular locales. Despite globalization, the characteristics of local economic environments continue to matter to business behaviour, employment growth, and the nature and extent of innovation.²⁶ Provincial and federal policy-makers, along with those in the Lower Mainland, need to pay close attention to the impact of land use decisions, infrastructure choices, housing costs, and the availability cultural and recreational amenities on the region’s competitive position and capacity to generate wealth. The accompanying text box offers some further reflections on the governance of Metro Vancouver.

METRO VANCOUVER GOVERNANCE

The fragmented nature of Greater Vancouver – 21 municipalities, one electoral area, plus a stunted regional authority – raises questions about the region’s ability to organize itself to compete and prosper in the global economy. We see a basic mismatch between the actual metro-scaled interdependent regional economy made up of innovative firms, post-secondary institutions, commuters, talented workers, and the transportation and other physical assets that ensure connectivity, on the one hand, and the administrative hodgepodge of often myopic local governments and their myriad of agencies, on the other. The ‘economic geography’ of Greater Vancouver is metropolitan in scale, not municipal, and this is true regardless of whether one is interested in commuting patterns, the movement of goods and services, the labour market, energy demand, the role of universities, or sporting and cultural amenities. To effectively manage growth and reach its potential as a ‘global city-region,’ Metro Vancouver should be looking at more streamlined, efficient governance arrangements, a stronger regional role, and a shift over time to a smaller number of discrete municipal units.

The Human Capital and Knowledge Nexus

Knowledge is fueling economic growth and social development in every part of the world. In business, leading-edge enterprises recognize that staying abreast of and effectively leveraging knowledge (in all its forms) is a core requirement for success. The same is true for the best non-profit organizations – and, increasingly, for affluent regional economies.

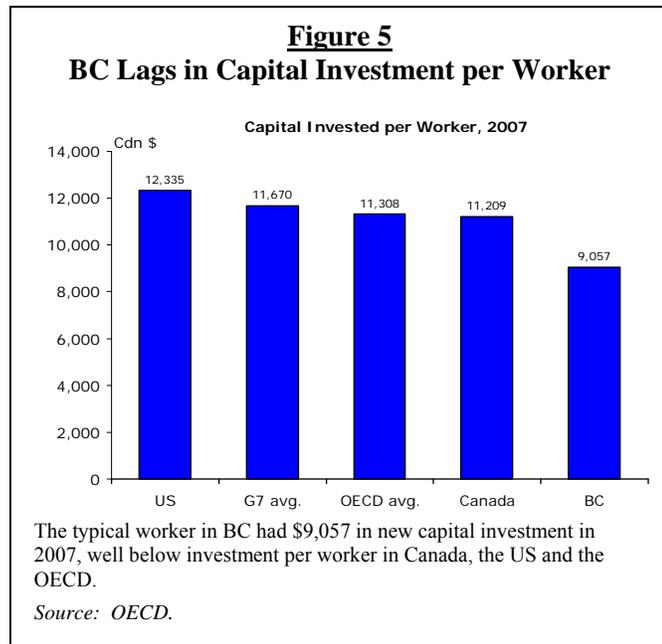
²⁶ Ontario Institute for Competitiveness & Prosperity, [A View of Ontario: Ontario’s Clusters of Innovation](#) (April 2002), esp. pp. 18-34.



Today it is widely understood that a prosperous economy depends on educated and well-qualified people – a point emphasized in virtually all of the papers developed for *Outlook 2020*. Most economists, asked to list the main factors contributing to economic development, would start with ‘education.’ In the United States, a massive body of scholarly research confirms that the country’s impressive economic growth in the 20th century was underpinned by a remarkable increase in educational attainment.²⁷ The picture is similar in Canada.²⁸ Countries and regions all over the world are investing heavily in human capital and knowledge development.

As a prominent Canadian think tank recently observed, “In a knowledge economy, it is almost certain that those without a base level of skills will be left behind.”²⁹ Improving human capital requires ongoing investment in education and skills development at all levels. It means

reducing school drop out rates, keeping more young people in school to achieve higher levels of skills and accreditation, and raising the fraction of young adults receiving higher education (in universities, colleges, skilled trades, and technical occupations). At a more specialized level, excellence in human capital also means increasing the number of people equipped with graduate education and other research credentials across a range of fields.



²⁷ Joshua Bendor, Jason Bordoff, and Jason Furman, An Education Strategy to Promote Opportunity, Prosperity and Growth, Brookings Institution (February 2007).

²⁸ For excellent reviews, see the following two studies by UBC economist Craig Riddell: “Investing in Human Capital: Policy Priorities for Canada,” in Jeremy Leonard, Chris Ragan and France St-Hilaire, eds., A Canadian Priorities Agenda: Policy Choices to Improve Economic and Social Well-Being (Montreal: IRRP, 2007); and “The Impact of Education on Economic and Social Outcomes: An Overview of Recent Advances in Economics,” in Garnett Picot, Ron Saunders and Arthur Sweetman, eds., Fulfilling Potential, Creating Success: Perspectives on Human Capital Development (Montreal: McGill-Queen’s University Press, 2007).

²⁹ The Institute for Competitiveness and Prosperity, Leaning Into the Wind: Task Force on Competitiveness, Productivity and Economic Progress, Seventh Annual Report (November 2008), p. 37.



Universities are at the centre of building a globally competitive knowledge economy. As Dr. David Turpin and his co-authors comment in their paper for *Outlook 2020*, “[t]hrough their integration of research and teaching, universities produce the highly-qualified personnel that our economy needs today, and they create the knowledge that drives innovation, productivity and competitiveness for tomorrow.”³⁰ But good universities are not enough. Successful economies also need to support technical training and establish attractive career paths for young adults who don’t pursue a university education. From investing in early childhood development to upgrading workforce literacy skills, encouraging training in trades and technical occupations, and equipping more young people with the skills for careers in S&T, the list of human capital ‘to-dos’ is extensive. In a world of scarce dollars and limited time, deciding where along the human capital spectrum to direct incremental resources is a difficult but important task.

Improving human capital requires ongoing investments in education and skill development at all levels.

British Columbia, like Canada as a whole, scores well on overall educational attainment and several other common measures of human capital. School completion rates compare favorably with most other jurisdictions. BC performs well on international tests of student achievement. The proportion of the population with some form of post-secondary education has risen steadily. Total real investment in educational services aimed at young people (aged 5 to 24) is approximately 10% above the Canadian average. How then to account for our rather lackluster productivity record? At least part of the answer lies in insufficient investment.³¹ As the Conference Board observes in a new report on Canadian productivity, “It appears...that it is Canada’s capital intensity that has been lagging, helping to explain the country’s relatively poor productivity growth performance over the

³⁰ David Turpin, Eric Sager, Lyn Tait and Ludgard De Decker, “Universities and the Knowledge Economy,” report prepared for the Business Council of British Columbia (August 2009), p. 4. Available at: www.bcbc.com

³¹ This observation is consistent with the findings of numerous empirical studies from the C.D. Howe Institute, the Conference Board of Canada, the Centre for the Study of Living Standards, and the Institute for Competitiveness and Prosperity.



past 20-plus years.”³² This finding is particularly pertinent to British Columbia, which has long trailed Canada in productivity growth and in capital invested per employee (Figure 5).³³ The Conference Board concludes that ‘human capital accumulation’ needs to be supplemented by a greater focus on ‘physical capital accumulation’ – i.e., encouraging investment in machinery, equipment, physical infrastructure, new technologies, and research.³⁴ We believe this message must be taken to heart in defining a post-Olympic prosperity agenda for the province.

What BC Might Look Like

All long-term forecasts are necessarily speculative. As the recent global financial crisis starkly illustrated, there are always unanticipated events and exogenous shocks that alter the expected path of the economy. Nevertheless, a review of trends shaping the provincial economy combined with some additional insights on industrial change can paint a general picture of what the economy is apt to look like at the end of this decade.

In many ways, the industrial structure and job market are likely to be quite similar to today. The province will still rely on resource-related industries, especially to generate exports; the United States will remain our leading trading partner, even as Asia comes to occupy a larger place in the global economy; the population will be bigger, by 12-15%, with growth driven by immigration (as is already the case); and somewhere around 80% of jobs will be in service industries – again, not much different than today.

However, these high level generalizations mask other changes, some of which are expected to have significant impacts on the economy, on public policy, and on the business environment.

³² Conference Board of Canada, Canada's Lagging Productivity: The Case of a Well Educated Workforce Lacking Much-Needed Physical Capital (January 2010).

³³ A. Sharpe et al, Investment in British Columbia: Current Realities and the Way Forward, Centre for the Study of Living Standards (December 2008).

³⁴ Canada's Lagging Productivity, op, cit., chapter 7. Sharpe, *ibid.*, reaches a similar conclusion.



- As discussed above, BC's population and labour force will be older and more diverse, with people born outside of Canada comprising a larger fraction of the workforce. And the average educational attainment level of the workforce will be higher than today.
- Asia's increasing global economic clout will be felt in terms of BC's direct exports and imports, as well as Gateway-related trade and traffic flows and the number of Asia Pacific tourists visiting the province.
- A greater share of BC's exports will consist of advanced technology goods, non-resource manufactures, and a broad mix of tradable services.
- More BC companies will be involved in and affected by international commerce and global competition.
- On average, the skill-intensity of work and the educational qualifications for employment will be higher than today.
- First Nations will have a bigger place in our economy and workforce.
- British Columbia will be part way down the path to becoming a low-carbon economy, with significant new renewable energy assets in place and more energy-efficient buildings, transportation systems, industrial processes, and communities.



III. COMMERCIAL AND INDUSTRIAL FOUNDATION FOR PROSPERITY

This section reviews the commercial and industrial foundations of the BC economy. Seeking to understand the structural issues that shape the economy and are expected to help determine future prosperity, the discussion is mostly at a high level. The *Outlook 2020* industry papers inform the overview, but no attempt is made here to summarize the industry-specific details. Although considerable attention is given to the province's export base, increasing exports of goods and services is not an end in itself. That said, through trade, related jobs and tax revenues, and linkages to domestic industries, a strong portfolio of export-capable industries is essential to BC's standard of living.

The backdrop for *Outlook 2020* is the recognition that British Columbia is a classic small open economy, accounting for less than 1% of North American GDP and population, and with basically no control over the prices of the traded products and services that it sells and buys. The salience of trade is illustrated by the fact that exports of goods and services to external markets³⁵ amount to 43% of provincial output. Imports represent an even bigger slice of GDP. Added together, exports and imports represent in the range of 90% of GDP – underlining the fact that BC really is an 'open' economy.

Traded Industries

Many studies of regional economic growth highlight the contribution of tradable industries generally and exports in particular to prosperity. "The prosperity of a region is determined primarily by the strength of its export base...all of those activities which bring income into the region by providing a good or service to the outside world."³⁶ Traded industries "are... typically concentrated in specific geographic areas and sell to markets beyond their local region, whether domestically or internationally."³⁷ They can be distinguished from industries whose main commercial orientation is to serve the domestic market. In any

³⁵ International and interprovincial markets.

³⁶ R.E. Rowthorn, *The Political Economy of Full Employment in Modern Britain* (Oxford University, 1999), pp. 22-23.

³⁷ Institute for Competitiveness and Prosperity, *Realizing Canada's Prosperity Potential* (Toronto: Institute for Competitiveness and Prosperity, January 2005), p. 13.



region, the tradables sector will be comprised of a mix of manufacturing and service industries. For a resource-rich economy like British Columbia, resource-based industries are also a key part of the tradables sector.

In most small economies, the evidence shows that traded industries are over-represented among the ranks of high productivity, high-wage private sector industries. The reason stems from the gains from trade that accrue when production costs fall as the scale of output and sales expand. Any strategy to strengthen BC's economy has to focus on traded industries and how to enhance their ability to flourish in larger markets.

For many people, the foundational role of trade in BC's economy may not be self-evident. Indeed, with the majority of employees found in industries oriented towards domestic services and consumption, such as retail trade, food and accommodation, construction, health care, education, and personal and household services, the importance of traded industries is easy to overlook. Most domestically-focused industries, however, are mainly engaged in re-circulating existing dollars throughout the economy. Without the injection of income provided by traded industries, the basis of support for domestically-oriented industries would be greatly diminished. The economic importance of export-driven income 'injections' is straightforward to conceptualize in the case of a small resource-dependent community. Yet the same logic applies at the aggregate provincial level.

Exporting also brings other, more subtle economic benefits. Access to external markets – the rest of Canada as well as other countries – allows local companies to take advantage of economies of scale that would be unavailable if they only served the local market. While having to compete in bigger markets is difficult and can sometimes lead to failure, it is a powerful stimulus for efficiency and productivity. Firms operating in a North American or global arena need to regularly innovate and invest in skills and the acquisition of capital equipment to stay competitive. Reflecting this, export-oriented firms typically are more productive, more innovative, and pay higher wages than their more domestically-oriented counterparts. All of this means that for British Columbia, having a greater share of the



economy involved in external trade is an effective way to achieve stronger growth and rising incomes over time.

Finally, exports provide income to finance the myriad of goods and services that households and businesses import. As David Baxter and his co-authors vividly outline in their paper *Changing People, Changing Places*, nearly all of the goods consumed in British Columbia come from outside our borders. Without trade, consumers here would have few choices and the prices of many purchased items would be much higher. BC relies heavily on imports to meet its needs for a diverse and ever-growing array of consumer and capital goods – everything from citrus fruits to computers, vehicles, medical devices and pharmaceuticals, consumer electronics, and all manner of industrial equipment.

None of this implies that industries producing for export are superior to those serving local markets. Domestic industries provide products and services that are necessary in a modern economy, including public and infrastructure services; a robust and competitive domestic market is a vital part of any jurisdiction's economic appeal. Local amenities and lifestyle factors attract the talent that allows for strong traded industry clusters and good research institutions. The reason for caring about traded industries is that the ability to export/sell

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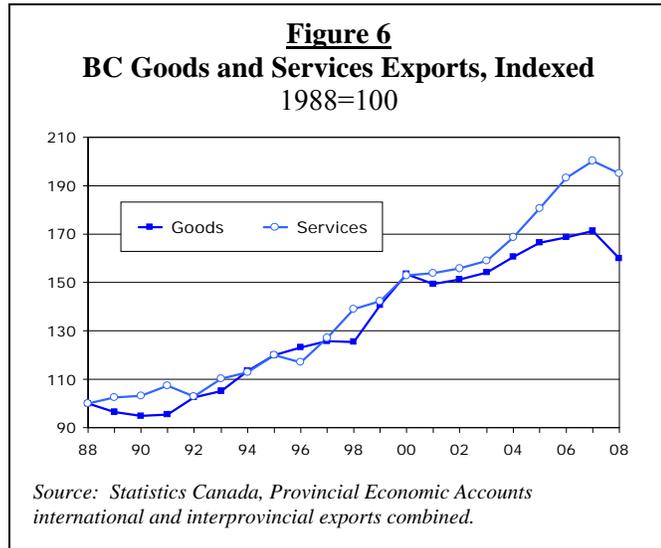
beyond the local market is fundamental to the economic well-being of any small economy.

A few decades ago, BC's economic base was relatively narrow and simple.

The extraction and processing of natural resources was the dominant feature. The largest sectors were forestry and mining. Fishing and agriculture were important as well, but to a lesser degree. Historically, tourism has also played a large role in the economy, but its visibility and influence increased after Expo 86. Today, tourism is one of the province's leading export engines thanks to large numbers of visitors from the rest of Canada, the United States, and many other countries.



Over time, BC's industrial structure has become more diverse. The traditional resource base has broadened to include natural gas as a leading export, while agriculture's footprint is substantial thanks to steady growth, including rapid expansion of the often overlooked aquaculture industry. A wider array of value-added goods is now produced from BC's primary



materials. As highlighted in the *Outlook 2020* paper on manufacturing, the province has also developed a sizable non-resource manufacturing base.³⁸ Even more change and greater diversity have come through the evolution of service industries, which now occupy a bigger place in the province's export mix – as discussed in Michael Goldberg's *Outlook 2020* paper on tradable services.³⁹ Tourism, transportation, education, financial services, management consulting, film and television, communications, design, software and environmental services have all grown to the point where, collectively, exports of services now account for more than one-third of BC's external trade.

A Closer Look at the Export Base

Some background on the size and structure of BC's export base is helpful in informing the discussion that follows. The total value of BC goods and services exported to other Canadian provinces and international jurisdictions in 2008 was \$80 billion, measured in current dollars.⁴⁰ This comprised just over 40% of provincial GDP, which is down from the start of the decade when exports were equivalent to closer to half of GDP. In part, the

³⁸ Canadian Manufacturers and Exporters, "Manufacturing BC – Outlook 2020," report prepared for the Business Council of British Columbia (2009). Available at: www.bcbc.com.

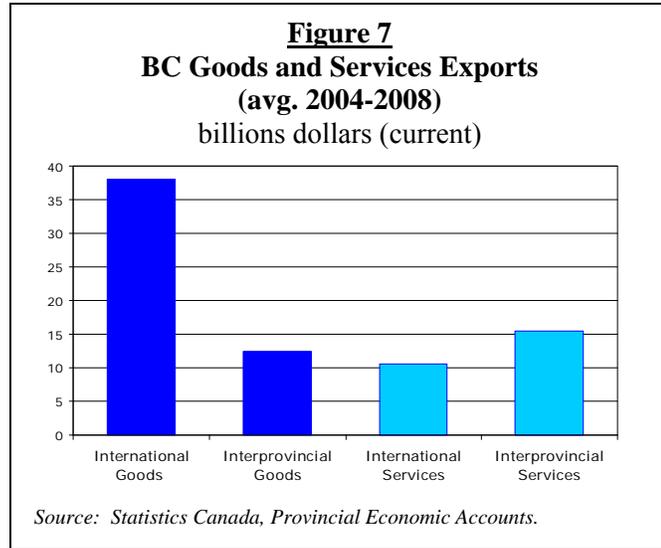
³⁹ Michael Goldberg, "Building the Economic Base: Tradable Services," report prepared for the Business Council of British Columbia (2009). Available at: www.bcbc.com.

⁴⁰ Statistics Canada, Provincial Economic Accounts.



lower number for 2008 reflects the effects of the global recession and the collapse of US housing starts that began almost two years before the onset of the recession. Since 1982 the export content of provincial GDP has averaged 43%.

A breakdown between goods and services reveals a few salient characteristics (Figure 7). First, primary products and manufactured goods exported to international destinations remain by far the largest export segment. Resources and related processed goods account for the vast majority (about 80%) of BC's foreign merchandise sales,



again illustrating that resources are central to the province's economic well-being – a point emphasized by David Baxter and his co-authors in their *Outlook 2020* paper,⁴¹

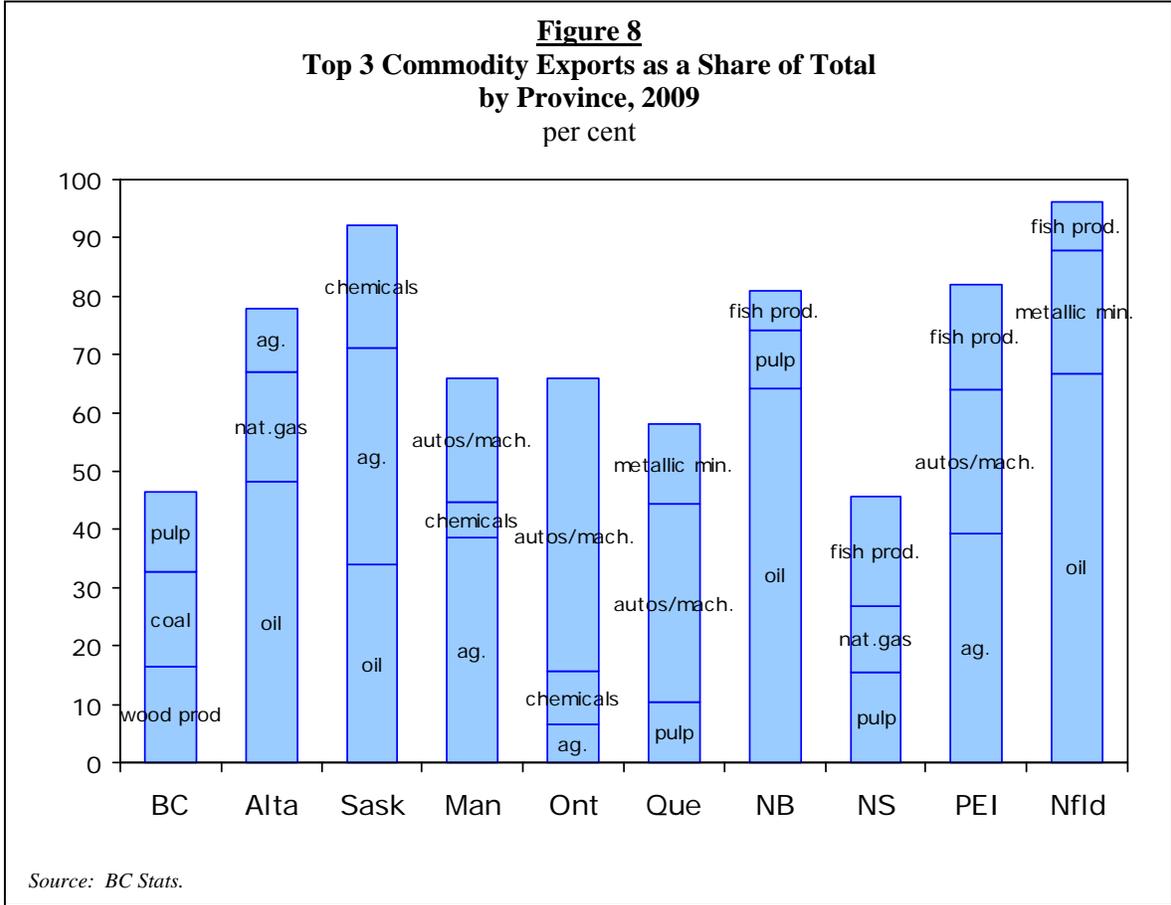
Services, however, have been gaining prominence, including on the trade side. Across most developed countries, including Canada, service exports have grown more quickly than exports of goods over the past two decades.⁴² Services that can be 'traded' across borders include activities as disparate as financial intermediation; the transportation of goods and people; communications; hotels, resorts, attractions and restaurants that cater to visitors; education; scientific and research services; environmental services; engineering; and a range of professional services. British Columbia has well-developed service industries in many of these sectors, and several of them have stepped up their export activity in the last half-decade or so.

⁴¹ David Baxter, Andrew Ramlo and Erin Ramlo, "Changing People Changing Places: Demographic and Economic Change in British Columbia," report prepared for the Business Council of British Columbia (2009). Available at: www.bcbc.com.

⁴² For an excellent review of international services trade, see A. Mattoo, Robert Stern and G. Zanini, eds., A Handbook of International Trade in Services (Oxford University Press, 2007).



Figure 8
Top 3 Commodity Exports as a Share of Total
by Province, 2009
per cent



Further decomposing exports into interprovincial and international categories, and dividing the past 20 years into shorter periods, reveals that growth in interprovincial service exports has been buoyant, climbing by around 40% between 2004 and 2008, compared to a 10% increase in the value of merchandise exports. Rising trade in services reflects growth in Gateway-related transportation activity, a trend that will re-emerge as the world economy rebounds from the 2008-09 downturn. Professional services, environmental services, education, and real estate and financial services are also likely drivers of BC's expanding tradable services exports.⁴³

Some caution is necessary in interpreting these patterns and in making inferences about future trends. One point to keep in mind is that growth in BC's international goods exports

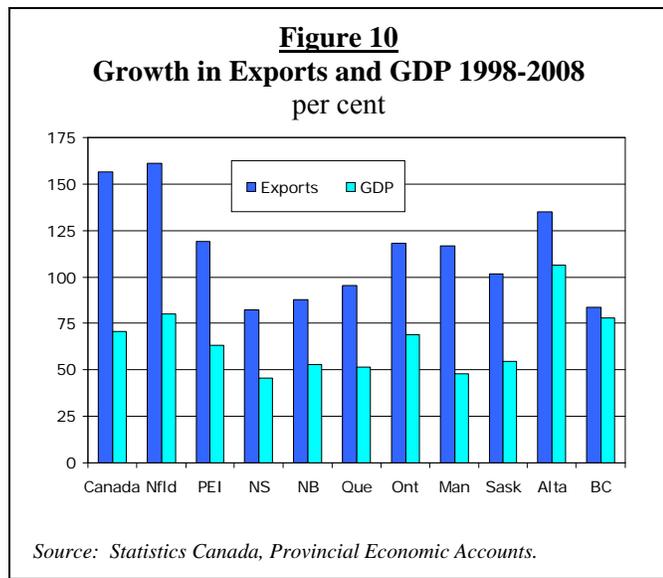
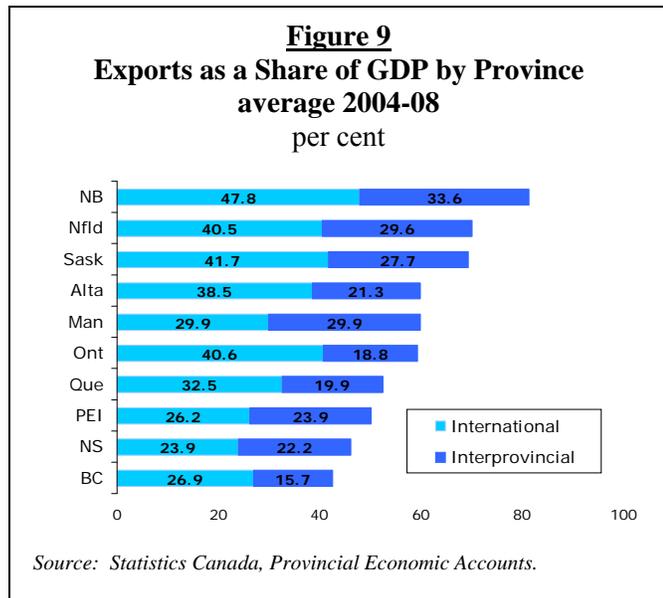
⁴³ We say 'likely' because of limitations on the data available on provincial trade in services.



was curtailed by the slump in US housing starts – a development that devastated shipments of lumber and other wood products. This unusual episode tempered the overall expansion of BC's exports, and masked strong gains in areas such as mining and mineral products, pulp, and chemicals, as well as a healthy increase in shipments of agricultural products. As the global economy recovers and US housing markets slowly improve, the value of BC's goods exports can be expected to move appreciably higher in the next 2-3 years.

That said, longer-term shifts in export markets are likely to affect BC's trade structure going forward. As noted in Professor Rosalie Tung's *Outlook 2020* paper, the rise

of Asia is reshaping global trade. For BC, the increase in exports to China stands out, but other Asian economies are also buying more BC products and services. In 1998, China purchased less than 2% of BC's merchandise exports. Over the past decade, exports to China surged by more than 300% and it now accounts for around 7-8% of merchandise exports, making it the province's third most important international market. Initially this expansion was concentrated in pulp, but China now is purchasing lumber, coal, chemicals and other products as well as services in growing volumes. Although China captures most of the headlines, trade with other Pacific Rim markets has also risen at an impressive rate.





While the downturn in the US housing market has exaggerated BC's reorientation to Asia and flattered the diversification of exports, Asia is clearly playing a more significant role in BC's trade. The province has benefited from a greater focus on Asia Pacific markets than the rest of Canada, and this advantage is expected to persist.

Another dimension of trade diversification involves industry or product mix. Compared to other provinces, BC's export portfolio is spread across more commodities. As shown in Figure 8, in 2009 BC's top three exports – wood products, pulp and coal – made up 46% of international merchandise exports. In comparison, in other provinces the top three exports accounted for between 60% and 90% of all export sales.⁴⁴ Again, the recent picture is distorted by the collapse of US housing starts and the associated fall in the value of lumber exports. In 2006, wood products made up 26% of BC exports whereas in 2009 their share had fallen to 16%. But even allowing for a somewhat bigger share for forestry, BC would still have one of the most diversified merchandise export bases among the provinces. And we expect that BC's export product mix will continue to diversify, even if slowly, over time. It is worth noting that Alberta, Ontario, New Brunswick and Newfoundland all have greater shares of merchandise exports coming from a single industry (oil, autos, oil and oil respectively) than BC has from its top three combined, as of 2009.

Although diversity in both markets and industry mix can be seen as strengths of BC's export portfolio, an overarching concern is that the tradables sector as a whole is small in relation to the size of the economy. This is illustrated by examining export-to-GDP ratios, which summarize the proportion of economic activity derived from selling goods and services to other provinces and countries. Based on this metric, which averaged 43% over 2004-2008, BC had the weakest export orientation in Canada (Figure 9).

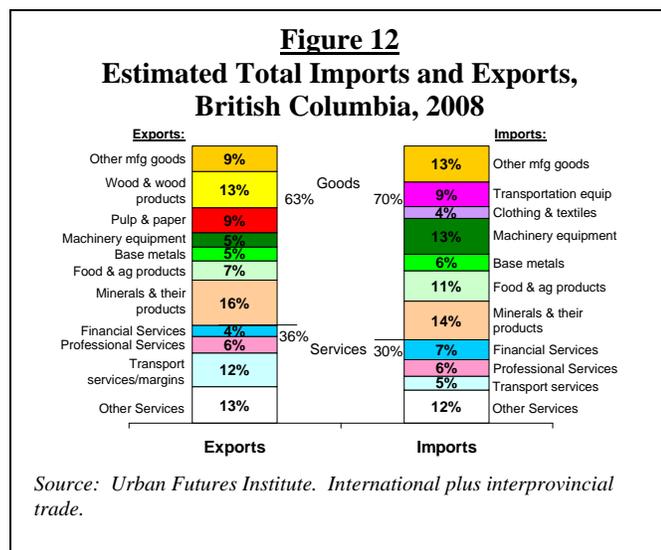
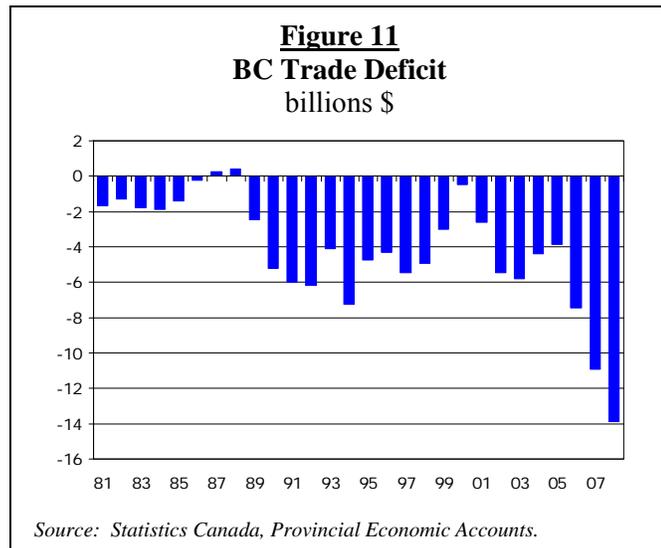
One important caveat is that the imports that go into producing exports should be considered in assessing a jurisdiction's trade structure. In the case of Ontario, automobiles and several other manufacturing industries tend to be highly integrated with global

⁴⁴ Nova Scotia is an exception; it has a similar level of export concentration as BC.



suppliers, so the final Ontario export product incorporates a high degree of imported materials and components. In contrast, resource products such as lumber and energy contain little imported content. Examining the ‘value added’ of exports provides a more accurate picture of the true economic contribution of exports actually generated within provincial borders. A study by Statistics Canada a few years ago found that BC’s export base was not as weak as it initially appeared, due to the lower import content of export shipments. Overall, the study classified BC as middling export performer among the provinces.⁴⁵ This does not alter the message that expanding the base of tradable goods/services would have a very positive impact on BC’s future prosperity.

A less than stellar record of building traded industries is also reflected in BC’s large and rapidly growing deficit in trade with the rest of the world. As depicted in Figure 11, the province has run an overall trade deficit for most of the past 30 years. In the last decade, the trade balance (including goods and services) deteriorated sharply. The difference between total exports and imports translated into a \$14 billion deficit (in current dollars) in 2008, equal to 7% of GDP (proportionately larger than the contemporaneous US



⁴⁵ Z. Ghanem and P. Cross, “The Import Intensity of Provincial Exports,” Canadian Economic Observer, (June 2003). The article is based on decade old data, but the general point that BC has a lower import content in its export sector still holds.



current account deficit!). Essentially, the growth of exports of BC-produced goods and services has not kept pace with the hearty appetite of local consumers and businesses for imports. An expanding population naturally stimulates demand for items produced elsewhere. But it appears that BC has not established a commensurate means to 'pay' for

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this growing volume of imports via the development of successful export-oriented industries. The trade deficit is financed by capital inflows and transfers from immigration, migration and other interprovincial

financial sources. If BC were a country rather than a sub-national jurisdiction that is part of a much larger national economy, one would have to question whether such capital inflows could continue indefinitely to finance an ever-widening trade deficit.

Resource Industries Remain an Economic Anchor

A key finding of ***Outlook 2020*** is that resource industries, including their downstream manufacturing components, still play a large role in underpinning BC's prosperity. If one asks the simple question, 'what does the world want that British Columbia is positioned to supply at a competitive price,' the main answer is: resource-based goods, plus related services and technologies. Despite the US housing slump, the recent global recession, and concerns over climate change, we anticipate that resource-based goods and related services will dominate the province's export base (and likely that of Canada as well) over the next decade. Indeed, to an extent that may surprise some, the evidence suggests that many of BC's resource-based sectors are actually 'sunrise' industries. In the past decade, the value of production and exports of coal, metals, minerals, and natural gas have all increased markedly. Looking ahead, robust global demand should spur mineral exploration and mine development, BC's natural gas reserves will keep expanding, the renewable and bio-energy industries are expected to grow, and the diverse agri-food sector will continue to be a valuable source of export earnings. In the case of wood products, in his ***Outlook 2020*** paper Peter Woodbridge concludes that "through investments in new products and serving



existing and new markets,” forestry can become a growth industry for BC.⁴⁶ Of course, resource producers can't stand still in a competitive world. To succeed, BC's resource industries have to be leaders in innovation, in the use of technology, and in environmental stewardship. Many will also have to renew and replenish their aging work forces.

A key finding of Outlook 2020 is that resource industries, including their downstream manufacturing components, still play a large role in underpinning BC's prosperity.

Wanted: New Economic Engines

While BC's rich resource base provides a solid economic foundation, it is important to nurture new engines of employment and wealth creation. More accurately these industries should be referred to a 'newer' rather than 'new,' since because most are quite well-established in the province. Further trade diversification by fostering growth in these newer (and in some instance still-emerging) sectors will be necessary to accommodate a rising population, to make the economy more resilient, and to offset the blows expected to come from shrinking lumber production in the interior (due to the pine beetle) and other unforeseen changes that may buffet BC's resource-based sectors. In some areas the province is well-positioned to develop more industries capable of participating in global markets. During the past two decades, several advanced technology clusters have taken root; tourism will get a lift from the 2010 Olympic and a greater propensity to travel on the part of 'burgeoning 'middle class' populations in emerging markets; services as a whole already produce one-third of our total export receipts; and BC's well-educated, creative, and multi-cultural population provides a valuable source of human capital to help grow globally-oriented businesses across the industrial spectrum.

Laying the Foundation for Prosperity

From this brief recap of BC's industrial structure and trade orientation a few key points emerge. One is that resource-based industries – including manufactures based on local raw materials – are a vital part of BC's export base. Another message is that services and other

⁴⁶ Peter Woodbridge, "The Forest Industry in British Columbia," report prepared for the Business Council of British Columbia (2009), p. 2. Available at: www.bcbc.com.



‘newer industries’ will continue to be key sources of innovation and growth. In reality both ‘new’ and ‘traditional’ industries are necessary to sustain BC’s economy in the coming decade. From our perspective, it is counterproductive to put too much emphasis on classifying industries along the lines of ‘new and ‘old.’ Even long-established industries require technology, innovation and creativity to prosper in today’s highly competitive global markets.

A number of common themes were identified in the industry research done for *Outlook 2020*. Nearly all of the industry papers cite infrastructure as essential to commercial success – among other things, it ensures connectivity to outside markets. This is true for resource-based industries, but it also applies to other traded industries that need to link with customers and suppliers around the globe. The **2020** paper on infrastructure notes that more can be done to establish policy and regulatory frameworks that support the movement of goods and people.⁴⁷ One example cited is the benefits BC would realize if Canada adopted an ‘open skies’ policy that increased air access vis-à-vis more external markets in the US, Asia and Europe. Excessive air travel fees and airport rents also work against the goal of connectivity.

Similarly, technology and its applications are crucial to competitiveness across multiple sectors. This includes applications of technology as well as information and data management (such as the Geosciences database for the mining industry). A highly skilled workforce is also a key ingredient in building productive, globally competitive industries. In the coming decade, British Columbia will need to attract talented people and dedicate additional resources to training and education.

⁴⁷ Jock Finlayson and Karen Graham, “Infrastructure Priorities for a Connection 21st Century Economy,” report prepared for the Business Council of British Columbia (2010). Available at: www.bcbc.com.



IV. STRATEGIES FOR PROSPERITY

As we navigate out of recession, it's a safe bet that most British Columbians aren't thinking about what the economy is going to look like ten years from now. But leaders in all sectors of society know that it's necessary to take a longer-term view. The world is changing, and the economic landscape for the province is shifting with it. Among the trends that should be top-of-mind for decision-makers are the diminished spending power of US consumers (at least for the next few years); the increased influence of Asia and other emerging markets in the global economy; the implications of continued, at times disruptive advances in scientific knowledge and technology; the start of what is set to be a generation-long baby-boom retirement wave; escalating health costs; the return of government budget deficits; and mounting concerns over climate change and other environmental issues.

British Columbia is adapting to these new realities, as are our companies, workers and communities. The decade in front of us is likely to be a time of turbulence rather than calm; to bring heightened rather than less intense competitive pressure for our businesses, workers and public institutions; and to witness an explosion of new knowledge and a profusion of data and information spanning many disciplines, industries, and fields of inquiry. It will be an exciting time, but also a challenging one for established economies and slow-moving organizations used to a more stable order.

Despite a prevalent attitude of complacency, it would be unwise to assume that BC's current high standard of living is assured, or that residing in what some call the 'best place on earth' is a guarantee of material abundance. Such an attitude plainly ignores the competitive economic environment and the rapid pace of technological and market change, and invites an inflexible preference for the status quo. It will not serve us well in the future. While British Columbia has made progress in several areas that relate to or impinge on economic well-being, the province continues to trail the Canadian average on key economic performance indicators such as per capita GDP, business investment, and exports; research and development – especially in the private sector; and productivity



levels and growth rates. Furthermore, BC is burdened with a stubbornly high incidence of child poverty and other social problems that cannot be ignored in thinking about our economic prospects.

Outlook 2020 has surfaced many valuable insights and suggestions for how to position British Columbia for success in the coming decade. In what follows, we draw on this rich body of material to sketch some ideas and strategic directions for a more prosperous, competitive and innovative British Columbia. Again, readers are reminded that the views expressed here are those of the authors of this synthesis paper and do not necessarily represent the policy positions of the Business Council of British Columbia.

At the outset, we want to underscore a point about the intersection between public policy and economic development. Most economists believe the proper place of government is not to drive economies via top-down policy decisions, large subsidies to favoured sectors, or firm-specific incentives.⁴⁸ Economic development increasingly is a collaborative process involving public agencies, companies, teaching and research organizations, and communities. There is a significant role for governments and for policy, but it primarily

lies in establishing attractive 'hosting conditions' for investment, entrepreneurship, skill upgrading, innovation, and other value-enhancing economic activity. What really matters is the manner in which public policy deals with issues such

Despite a prevalent attitude of complacency, it would be unwise to assume that BC's current high standard of living is assured, or that residing in what some call the 'best place on earth' is a guarantee of material abundance.

as human capital development, infrastructure, the quality of public institutions, and the business environment. Government can also seed and facilitate the partnerships and collaborative arrangements that are becoming instrumental to innovative economic development in many leading jurisdictions.

⁴⁸ We would note that this view may not necessarily be shared by all of the authors of the **Outlook 2020** background papers.



Talent: Investing in Human Capital

Economists agree that an educated workforce is the most important source of economic advantage, particularly for relatively high-wage jurisdictions. Knowledge, skills and ideas are basic ingredients of productivity growth for individual businesses and regional economies alike. Globally and across North America, competition for talented workers, scientists, researchers, professionals, managers, and entrepreneurs is intense. The availability of high-quality education and training is essential to developing and maintaining a world-class workforce.

The importance of human capital is reflected in many of the *Outlook 2020* discussion papers. In its assessment of the province's technology sector, the BC Advanced Technology Industry Association identifies a "shortage of skilled technology workers and senior technology management talent" as a key constraint on growth. Attracting "executive talent from outside of BC" is cited as a particular challenge, due to the small number of major technology firms in BC and traditionally lower pay levels. It remains to be seen whether the economic and fiscal crisis gripping California and the stronger Canadian dollar will enhance BC's appeal for mobile technology executives and entrepreneurs.⁴⁹ PricewaterhouseCoopers' paper on BC's tourism industry points to the difficulties the industry faces in attracting and retaining qualified employees as it goes head to head with other industries that often offer higher wages.⁵⁰

As noted in section II, British Columbia scores well on most indicators of human capital – e.g., levels of educational attainment, the performance of K-12 students on standardized international tests,⁵¹ and the educational qualifications of new immigrants. But investing in human capital will be even more important in the future, as new wealth increasingly comes to depend on knowledge, skills and creativity. Government projections show that three-

⁴⁹ BC Technology Industry Association, "BC's Advanced Technology Sector: Reaching for the Next Level, report prepared for the Business Council of British Columbia (2009), p. 18. Available at: www.bcbc.com.

⁵⁰ PricewaterhouseCoopers, "Opportunity BC 2020: Tourism Sector," report prepared for the Business Council of British Columbia (2009). Available at www.bcbc.com.

⁵¹ The OECD's Program for International Student Assessment places BC near the top among advanced jurisdictions in reading, mathematics and science literacy among 15-year olds.



quarters of future job vacancies will require a post-secondary education. In such world, policy-makers need to ensure that an increasing proportion of the working-age population holds some kind of post-secondary credential. And business will have to step up its commitment to training and skill development for existing and new employees.

The research done for *Outlook 2020* indicates that there are gaps in our talent development systems. As Dan Perrin notes in his review of First Nations economic development, educational attainment among First Nations has improved but still trails that of the non-aboriginal population.⁵² This is an area where government, business and First Nations have a shared interest in working together to further narrow educational achievement and job market performance gaps. For some BC industries, including resource-based sectors like forestry and mining, the under-employed aboriginal population may represent an untapped pool of future workers who reside in areas where much of BC's resource industry activity is concentrated.

As Clyde Hertzman, Paul Kershaw and their colleagues document in their paper for *Outlook 2020*, far too many young children are not getting a strong start in life, leaving them without the education and skills needed for gainful employment when they emerge from (or drop out of) school.⁵³ This, in turn, is linked to the alarmingly high proportion of children in BC who are growing up in very-low income households. With labour force growth rates poised to slow over the next two decades, having 20-25% of youth failing to acquire the skills and knowledge needed to become productive adults will entail a steep economic cost. Dr. Hertzman and his co-authors conclude that investing substantial additional resources in early childhood development is necessary. Their proposal is well-researched and deserves careful consideration.

⁵² Dan Perrin, "First Nations and Economic Development in the Coming Decade," report prepared for the Business Council of British Columbia (2009). Available at: www.bcbc.com

⁵³ Clyde Hertzman, Paul Kershaw, et al., "15 by 15: A Comprehensive Policy Framework for Early Human Capital Investment in British Columbia," report prepared for the Business Council of British Columbia (2009). Available at: www.bcbc.com.



Immigration is another dimension of human capital that warrants greater attention. As noted above, newcomers to Canada are projected to account for most of BC's future population and labour force growth. Helping immigrants transition into the economy and job market is a challenge for many 'receiving' countries, including Canada. Occupational and professional licensing bodies often make it difficult for immigrants to obtain the qualifications and experience they need to work here. Since the early 1990s, growing numbers of immigrants arriving in Canada, including BC, have found it harder to obtain employment in their occupation or profession, with many experiencing protracted periods of under-employment and/or low income.⁵⁴

We have three specific suggestions with respect to immigration:

- Together with employer groups, the provincial government could consider ramping up pressure on occupational bodies to simplify certification systems and devise transition programs for immigrants with appropriate credentials and language skills. Absent sufficient progress, it may be necessary to use legislation to reduce barriers to the employment of immigrants.
- Second, BC is in a position to continue to expand the Provincial Nominee Program to facilitate the entry of more immigrants with needed skills. There is no reason why the PNP cannot target 10,000 or more new immigrants per year.
- Government may also wish to explore whether, through the PNP and other initiatives, it is possible to encourage more newcomers to settle in areas of BC outside of the Lower Mainland. This would spread the benefits of immigration across the province while easing the pressure on housing costs in Greater Vancouver.

As a final observation, the relentless upward march of health care budgets raises concern about the implications of this trend for other 'human capital' priorities. The time may be approaching when it is necessary to have an open discussion about the impact of escalating

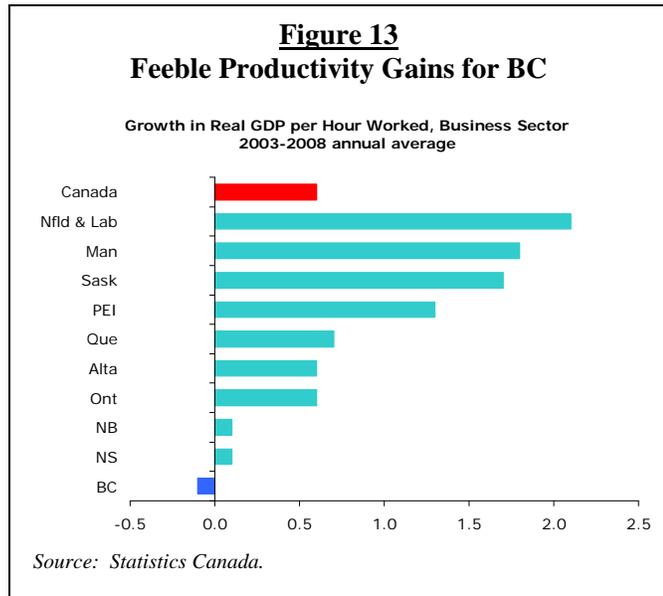
⁵⁴ This is a nation-wide phenomenon.



health costs on the ability of governments to finance other aspects of ‘human development.’ There is a danger that ‘current consumption’ of health services will – if it hasn’t already – crowd out worthwhile investments in areas like early childhood development, post-secondary education, and skill upgrading for the existing workforce. We see no simple solution to this ‘wicked’ problem. Political leaders cannot be expected to take complete ownership of such a charged issue – they need the constructive engagement of others in society.

Sharpening BC's Productive Edge

Even if one assumes higher immigration levels and a modest, gradual increase in the average retirement age, the growth of BC's labour force will downshift to below 1% per year within the next decade. As that trend unfolds, economic progress – i.e., growing the economic pie – will hinge on advances in productivity and innovation, rather than on adding more people to the workforce. In this context, the argument for a BC productivity agenda is compelling. Bank of Canada Governor Mark Carney recently observed that Canada has fallen further behind the United States and many other industrial countries in raising the level of business sector productivity;⁵⁵ less well understood is how poorly British Columbia has fared in this area, even relative to Canada. The province trails the national benchmark on output per hour worked, the basic measure of productivity. And its record is even worse when it comes to increasing productivity over time.



The good news is that many of the

⁵⁵ Mark Carney, “The Virtue of Productivity in a Wicked World” (March 24, 2010).



tax policy changes which BC has introduced in the past decade – particularly lower business tax rates, reduced taxes on entrepreneurs and workers, elimination of capital taxes, and harmonization of the provincial sales tax with the GST – are well-aligned with the goal of raising productivity, and can be expected to have a positive effect over the

Even if one assumes higher immigration levels and a modest, gradual increase in the average retirement age, the growth of BC's labour force will downshift to below 1% per year within the next decade.

medium-term. Still, the task is ongoing, and BC's lackluster productivity record is worrisome. We believe the province would benefit from an in-depth review of the productivity challenge to determine the reasons for BC's weak position

and what might be done, over time, to improve the situation.

The recent sharp appreciation of the Canadian dollar against the US currency has squeezed many trade-exposed industries, especially in the manufacturing sector, but also tourism, film production and some others. The latest KPMG Competitive Alternatives report finds that, overall, British Columbia remains cost competitive as a business location on both a North American and a global basis – a status that we can and should be using to market the province as a desirable investment destination.⁵⁶ However, the stronger Canadian dollar is eroding some of BC's traditional cost advantages. And as the Bank of Canada recently noted, all regions of the country have been losing ground to the US on unit labour and unit production costs calibrated in US dollar terms.⁵⁷ This makes it vitally important that BC maintain a competitive business tax structure going forward. It also suggests that in pursuing its 'green energy' agenda, the province needs to guard against the risk of excessive upward pressure on the price of electricity – an area where BC has long enjoyed an advantage over most other North American locations.

In sum, while British Columbia has entered the new decade in reasonable shape compared to many other jurisdictions, with a competitive overall tax structure, a strong base of

⁵⁶ KPMG, Competitive Alternatives (2010).

⁵⁷ Bank of Canada, Monetary Policy Report (April 2010).



human capital, and a diverse industrial mix, the competitive landscape remains challenging. Provincial policy-makers would benefit from a deeper understanding of the changing economic and technological environment. At present, the government's capacity is thin in this area. Very few analytical, policy and program resources in Victoria are devoted to understanding or nurturing the growth of advanced technology industries, driving innovation and commercialization, tracking the competitive strategies of other jurisdictions, or marketing BC as a desirable investment location. The province needs to significantly bolster its capabilities in industrial analysis and policy development in areas like competitiveness, innovation, and science and technology.

Unleashing the Economic Potential of the North

Historically, British Columbia's prosperity has been tied to the development of resource-based industry clusters and supporting infrastructure in regions outside of the major population centres. These industries remain critical to our economy. They supply most of our exports, are a major source of demand for locally provided services, and are the foundation for scores of communities. Some two-thirds of the province's land base and the vast bulk of its natural resource wealth is located in 'northern' BC.⁵⁸ Yet because this massive area has less than 10% of the population, it can be overlooked when decisions are made. Indeed, there is a danger that the demographic dominance of 'urban' British Columbia will obscure the reality that the province's prosperity continues to be linked to the north.

What will drive economic development in the north are power generation and transmission, mining, natural gas, infrastructure development, transportation and logistics, and a revival of forestry. 'Catalytic' projects are particularly important in stimulating economic development in this region: the Site C hydro-electric project, which the province has now decided to advance to a stage three environmental review; the proposed Enbridge Northern Gateway Pipeline; the Highway 37 Transmission Line; the Fairview Phase II container port expansion at the Port of Prince Rupert; and Rio Tinto Alcan's modernization

⁵⁸ Corresponding roughly to the huge region covered by the Northern Development Initiative Trust.



program at its Kitimat facility. All of these projects would strengthen the north's economy, while also benefiting the province (and Canada) as a whole.

Building infrastructure to move people and goods and to support economic development has long been a priority for the province, and current governments have operated in this tradition. Recent provincial and federal government decisions to invest in the Highway 37 transmission corridor, the Port of Prince Rupert, and the upgrading of highways in the north are a positive signal. While Canadian policy discussions around infrastructure often concentrate on urban communities, resource-dependent regions also require infrastructure

...there is a danger that the demographic dominance of 'urban' British Columbia will obscure the reality that...our prosperity continues to be closely linked to the north.

to grow and connect with markets. This is relevant in the BC context, as it happens that several industries with the brightest growth prospects are concentrated in the north. To cite a few examples: mineral exploration

and mine development (see the **Outlook 2020** paper by Michael McPhee); natural gas (see the **Outlook 2020** paper by David Molinski); electricity generation and transmission (the subject of a second paper by Molinski); and the (hoped-for) development of a bio-energy industry linked to forestry. There are opportunities to add value to all of these resources. Nor should it be forgotten that the lumber industry, also heavily concentrated in the interior and north, is poised for a long-awaited rebound, as American housing starts move back toward a long-term equilibrium level of 1.5-1.6 million – a point forcefully made by Peter Woodbridge in his **Outlook 2020** paper on the future of BC's forest industry.

Against this backdrop, **Outlook 2020** surfaced a number of other ideas for unleashing the wealth creation potential of northern BC, some in the discussion paper co-authored by Initiatives Prince George Development Corporation and the Northern Development Initiative Trust:

- Development of BC's upstream oil and gas industry has been aided by a tailored regulatory regime overseen by a dedicated provincial agency, the Oil and Gas Commission. Why not establish a similar arrangement for mining? While mineral



exploration has increased, converting commercially viable mineral deposits into new operating mines has been painfully slow. Drawing on the lessons of the oil and gas sector, the province could develop a separate review, assessment and permitting agency for mining, based in the north. This would complement the recent commitment by the federal government to streamline its cumbersome and often duplicative environmental assessment process for new projects.

- Over the past decade, the province has invested in transportation infrastructure and transit improvements in the Lower Mainland. While there is a continuing need for transportation investments in the 'south,' infrastructure development in the north is also a priority. In this regard, accelerating the timeframe for completion of the 'Cariboo Connector' would clearly benefit the region. So too would proceeding with technical and safety upgrades to Highway 97 through the Pine Pass, to open up northeast oil and gas opportunities to supply and service providers based in north-central British Columbia.
- The existing model of public ownership of forest land has strong support across the province, even though its long-term economic consequences are mixed at best. At a time of mounting competition in BC's traditional wood products markets, it makes sense to find ways to encourage new private sector investment in forest lands. In his contribution to *Outlook 2020*, Peter Woodbridge recommends that the provincial government explore innovative forms of forest tenure designed to attract long-term capital into public lands and foster more entrepreneurial approaches to forest management.
- Finally, the province has made progress with First Nations by implementing revenue-sharing agreements with aboriginal communities in areas of high resource development potential. These kinds of agreements have the potential to kick-start new business ventures involving First Nations and stimulate economic growth in the north. Building and deepening relationships with First Nations is the key to sustainable economic development on the land base. This mindset needs to become embedded in the thinking and operational planning of government decision-makers, businesses, and communities.



Exporting Services

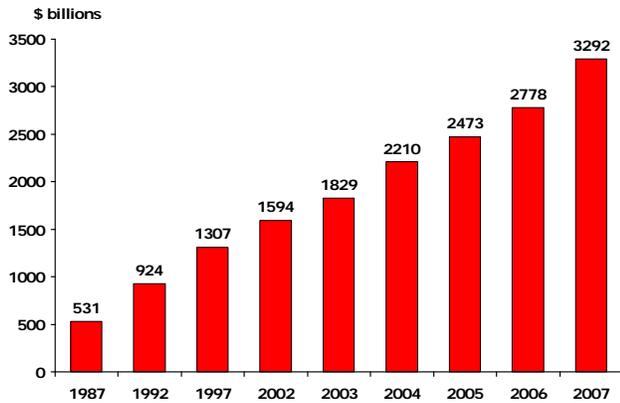
Service industries, despite their pervasive presence in all modern economies, still tend to be viewed in a supporting role rather than as a source of economic growth. This is especially true with respect to exports. Yet, the wealth of many of the world's most affluent regions (London, New York, Paris, Singapore) is based on exporting services, not on producing resources or manufactured goods. Moreover, services now account for about one-quarter of global trade – a proportion that has been climbing in recent decades. This year, the value of world exports of commercial services is likely to top US\$4 trillion.

As Michael Goldberg outlines in his

Outlook 2020 paper “Building the Economic Base: Tradable Services,” services that can be sold to customers beyond their place of production span a broad range of industry sectors and offer major upside opportunities for the province. He notes that “we have not traditionally thought much about the value of exporting services from BC. Our focus has been on exporting our natural resources and products made from them.”⁵⁹ In the post-Olympic decade, this perspective is outdated.

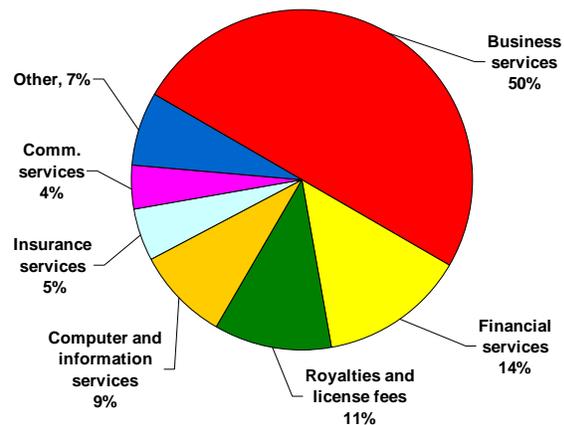
⁵⁹ Michael Goldberg, “Building the Economic Base: Tradable Services,” report prepared for the Business Council of British Columbia (2009), p.41. Available at: www.bcbc.com.

Figure 14
Growth of World Exports of Commercial Services, 1987-2007



Source: World Trade Organization. US dollars.

Figure 15
Composition of World Exports of Commercial Services, 2006





British Columbia's economy is already heavily oriented towards service with over 75% of GDP originating in the various service industries – the highest proportion among all of the provinces. A well-diversified services base is also reflected in BC's export profile. The value of international merchandise exports is approximately 3.7 times greater than the value of international services exports. In comparison, the same ratio for Canada stands at 7.3.⁶⁰ In Alberta, with its disproportionate dependence on energy, merchandise exports are 12 times the value of service exports. Many tradable services are high in value and so support high quality jobs. We believe traded services can make a significant contribution to building and further diversifying BC's export base in the coming decade.

TOURISM: BC'S BIGGEST SERVICE 'EXPORT' INDUSTRY

Tourism is an important economic generator for British Columbia. The industry encompasses a variety of economic activities that provide goods and services to visitors. In fact, tourism is made up of components drawn from several different industries: transportation, retail trade, accommodation and foodservices, cultural services, vehicle rental, and recreation, among others. Only the shares of revenues in these industries that come from tourists are counted as part of the tourism sector.

BC Stats estimates that tourism amounts to about 4% of the provincial economy, based on real GDP. Using the same methodology, BC Stats also estimates direct tourism employment at 120,400.

Approximately 72% of overnight visitor revenues in BC are derived from out-of-province visitors. The other 28% comes from BC residents traveling within the province.

Among international visitors, the United States remains the largest source of tourists for BC, but overall visitor numbers from the US have been on a downward trend since 2001 (especially for same-day visits).

Factors affecting BC's competitiveness as a visitor destination include:

- the value of the Canadian dollar relative to other currencies;
- energy/fuel prices;
- economic conditions in key target markets (the US, the rest of Canada, Europe, Japan, etc.);
- road and air connections to and within BC;
- the tax burden imposed on tourism goods and services; and,
- the range, quality and price of tourism product offerings in the province.

Source: PricewaterhouseCoopers report to the Business Council (2009).

One reason for the province's current relatively high share of service exports is its Gateway position. Commercial transportation services loom large in the provincial export profile. Greater Vancouver enjoys transportation advantages in virtually all modes. Vancouver International Airport (YVR) is the second busiest trans-Pacific airport in the

⁶⁰ Arguably, this speaks to BC's fairly strong position in tradable services, but it also reflects the weakness of the merchandise export base.



Americas. An abundance of global and local transportation resources has made Vancouver a leading Pacific Gateway by land, sea and air, formalized in the federal-provincial Gateway Projects and policy frameworks. Port Metro Vancouver is not just Canada's biggest port but one of the most important in North America. The Prince Rupert container port and cruise ship facility have added to our service export capabilities, as have the BCIT Marine Campus in North Vancouver, the International Maritime Centre (IMC) and the NorthWest CruiseShip Association.

International education is another tradable service with promising growth prospects. The province's proximity and ties to the Asia Pacific have been helpful in attracting foreign students. Foreign students generally pay 'market-based' tuition fees, which substantially exceed the fees charged to BC residents. And they support local economies via their spending on local goods and services. As such, international students are a valuable source of 'export' earnings, and of extra resources for BC educational institutions. Thompson Rivers University provides an excellent example of education as an export generator, one that can be emulated by other tertiary institutions. As profiled in the Vancouver Economic Development Commission's *Outlook 2020* paper, the international language industry has become a visible economic contributor in the region.

Health care is not immune from the trend toward the globalization of services. It can be argued that health care in BC would benefit if new revenue sources were available to help sustain local programs. Rochester, Minnesota (the Mayo Clinic), Johns Hopkins in Washington, D.C., the Anderson Cancer Centre in Houston, and medical centres in New York, Miami and Boston are all well-known for providing high-end medical care to non-US patients. More recently, centres like Havana, Bangkok, Mumbai and New Delhi have emerged as successful 'exporters' of health services. Singapore generates up to half a billion dollars a year from the provision of medical and other health services to out-of-country patients, while maintaining universal coverage for its own population at a relatively low cost.



British Columbia has excellent health care resources and world-recognized expertise in cancer research and treatment and in a number of other fields. We also enjoy strong capacity in health and biotech research. Centralized data and expertise give the province a leg up in clinical trials. Finding a way to marshal these assets to build a commercially viable ‘health export’ sector, while ensuring improved access and treatment for BC residents, may not be simple – but it is a challenge worth pursuing in a world where the demand for quality health services continues to march higher.

Dr. Goldberg’s paper also references software, design, finance, environmental services, entertainment, and professional services as tradable services in which BC has substantial upside potential. Architectural and engineering services are among our best-known internationally marketed services. The province is home to many of Canada’s best

Health care is not immune from the trend toward the globalization of services.

architects with international reputations and track records of success. The engineering sector is another leader, going abroad long ago to smooth out demand

cycles and build export markets. British Columbia is also developing expertise in fields linked to environmental remediation, pollution mitigation and energy efficiency. Greater Vancouver and the province also have established clusters in ICT, film and new media, coupled with emerging strengths in the broad field of design.

Even a cursory overview makes it clear that services are poised to play a larger role in BC’s economy in 2020, including in the export base. The province would benefit from better data on service industries, and from a coherent strategy to promote their export potential. Most tradable services are urban-based, so their advancement will entail developing suitable regional policies to foster their growth and long run viability. This is a task for local and regional governments and for industry, not just the province. Overall, the time is right for a stepped up policy and programming focus on tradable services and the contributions they can make to assuring BC’s prosperity in the years ahead.



Innovation and Commercialization

Much recent academic and policy literature emphasizes how innovation is driving economic progress. Globally competitive companies typically differentiate themselves through innovation: by introducing new products and services that meet customers' needs, finding different ways of going to market, or achieving novel advantages in their internal processes. Too few BC companies compete in this way.

Innovation has multiple dimensions – research and development carried out in universities, businesses and institutes; patent activity; the diffusion of knowledge and new technologies across business sectors; and the availability of venture and other 'seed' capital to support the formation and growth of innovative firms. British Columbia has a mixed record on innovation. The BC Progress Board reports that British Columbia ranks 5th in Canada in R&D spending as a share of GDP. Total spending on R&D edged up from less than 1% of GDP in 1990 to a still very modest 1.4% by 2006. Still, business investment in R&D is very low, a finding that is linked to the province's industrial structure (weighted heavily toward service industries which perform very little R&D). Federal and provincial government support for front-end research, particularly in universities and teaching hospitals, has increased over time, but relatively few businesses in BC are directly involved in R&D. In part this may reflect the 'small business' orientation of the province's private sector, including the advanced technology sector. Contrary to what many people may believe, the presence of large companies is an important determinant of regional innovation. Worldwide, 90% of all business R&D is performed by companies with more than 250 employees.⁶¹ And bigger firms certainly have a greater capacity to finance innovation.

One factor that is commonly overlooked but which is crucial to innovation-fueled economic growth is business ambition. Are local companies dedicated to innovation and market expansion, and willing to take the necessary risks? As the Council of Canadian

⁶¹ Organization for Economic Cooperation and Development, OECD Industry, Science and Technology Scoreboard (2007).



Academies recently observed, “Business ambition...reflects the extent of entrepreneurship and drive.”⁶² Absent this, no region is likely to enjoy innovation-based economic growth, or to witness the emergence of a critical mass of significant, global-scale businesses built around innovation. The extent of business ambition and the nature of the competitive strategies chosen by companies are not matters that governments directly control; ultimately, they depend on the values, goals and skills of managers and entrepreneurs in the region.

There is evidence that the growth of innovative businesses in Canada, including BC, is impeded by difficulties in obtaining risk capital.

Unlike many other businesses,

small- and mid-sized innovative firms typically depend on equity rather than debt to finance growth (this reflects the inherent risk of innovation and the fact that such firms lack tangible assets to use as collateral for borrowing). However, the sources of equity finance for innovators are limited in Canada.⁶³ This problem is linked to and exacerbated by the fragmented and excessively tax-driven character of the Canadian Venture Capital sector as it has evolved over time.⁶⁴ Recent changes in federal tax policy may help to attract more American VC funding into Canada, increasing the pool of growth capital for innovative companies and strengthening the quality of the VC industry as a whole.

Obtaining economic value from innovation usually requires commercialization. New ideas matter, but their commercial value comes from implementation or deployment in the marketplace. This is one part of the innovation spectrum where Canada, and by extension British Columbia, fall short.⁶⁵ Too few good ideas and innovative technologies lead to

One factor that is commonly overlooked but which is crucial to innovation-fueled economic growth is business ambition. Are local companies dedicated to innovation and market expansion, and willing to take the necessary risks?

⁶² Council of Canadian Academies, Innovation and Business Strategy, op. cit. p. 10.

⁶³ S. Wang, “Financing Innovative Small- and Medium-Sized Enterprises in Canada,” Industry Canada, Small Business and Tourism Branch, Working Paper (October 2009).

⁶⁴ Douglas Cumming, Financing Entrepreneurs: Better Canadian Policy for Venture Capital, C.D. Howe Institute Commentary (April 2007).

⁶⁵ Council of Canadian Academies, Innovation and Business Strategy: Why Canada Falls Short (2009).



commercial success. Yet successful commercialization of innovative ideas, products and services is the foundation of economic growth. British Columbia's prosperity can be advanced by enhancing the ability of local companies to commercialize and innovate. Essentially this means finding ways to support the translation of good ideas into commercially viable products and services.

According to an *Outlook 2020* paper written by the British Columbia Innovation Council, “a rich and interconnected support infrastructure for entrepreneurs is key to the success of an entrepreneurial cluster in any jurisdiction.”⁶⁶ The entrepreneurship infrastructure can be thought of as the systems, networks, venues and actors that support entrepreneurial success, increase local economic development, and reduce the risk of starting a company for entrepreneurs. It includes things such as IT infrastructure, education programs for entrepreneurs, networks of mentors and advisers, lab space, incubator parts, angel investors, venture capitalist and professional expertise for business services (accountants, lawyers and so on).

A healthy entrepreneurship infrastructure provides product development and commercialization tools to receptive entrepreneurs. Skills, experience and connections are passed to the entrepreneur by the systems, networks, venues and actors that make up the entrepreneurship infrastructure. The vehicles for this knowledge transfer are coaching, mentoring, training/professional development and introductions.

Commercialization is predominantly a private sector phenomenon. As the BC Innovation Council points out, however, the responsibility for developing a robust ecosystem that supports innovation and commercialization does not rest solely with the private sector. “In key technology jurisdictions around the world governments are taking an increasingly interventionist role and collaborating with the private sector. These private-public partnerships are helping to fund new and existing business and technology accelerators and their clients as a way of [speeding]... the commercialization of technology and the

⁶⁶ BC Innovation Council, “BC Entrepreneur Infrastructure Requirements to 2020,” report prepared for the Business Council of British Columbia (2010). Available at: www.bcbc.com.



cultivation of a healthy stable of new and sustainable technology companies.” British Columbia would be well-advised to take a close look at these kinds of models for stimulating commercialization in the broadly defined technology sector.

In some cases the public sector can also serve as an important source of early or lead demand to spur commercialization. For example, with government entities controlling most health care funding, the development and testing of innovative healthcare products and services is an area where the public sector could leverage local demand to create opportunities for BC companies to commercialize products and services. There are similar opportunities in green technologies, ICT, logistics, and education. Local market access, including to markets where public sector institutions possess most of the buying power, allows local companies to gain an important early ‘track record’ which is often a critical hurdle in building an innovative company and achieving export success. More generally, it is important to understand that the ability of BC firms to develop and export sophisticated goods is enhanced if the local marketplace is characterized by buyers who put a high value on innovative products and technology solutions.

British Columbia is well-positioned to further leverage its significant investment in R&D by devoting more resources and attention towards commercialization and user-driven innovation. A strong entrepreneurship infrastructure, including what the Innovation Council describes as a robust ‘acceleration ecosystem,’ can increase the birth and success rates of local high-tech start-ups and ultimately help to strengthen and diversify the economy. The BC government is already a large contributor to the province’s entrepreneurship infrastructure through its funding of industry organizations, the BC Regional Science and Technology Network (BCRSTN), universities, specialized incubators like Genome BC, and business competitions like New Ventures BC. Indeed, in recent years, governments all across Canada have taken steps to accelerate commercialization. Federal and BC government support provided to the Centre for Drug Research and Discovery at UBC is a good example: CDRD’s explicit mandate is to help commercialize new life sciences products and technologies developed by small and



medium-sized innovators. Further investments in acceleration ecosystem programs could help to address BC's short term and long term commercialization challenges.

Finally, investment in machinery and equipment (M&E) and in information and communications technologies (ICT) is another crucial requirement for becoming a more innovative economy. Research demonstrates close links between ICT investment and economic growth.⁶⁷ This is another area where BC falls below the Canadian average and substantially underperforms the leading American and European jurisdictions. Boosting investment in M&E, including ICTs, will be essential to raising productivity and moving to an innovation-led BC economy.

In the post-Olympic decade, BC would benefit from a multi-pronged research and innovation strategy that sets goals for improvement and seeks to optimize the substantial public resources already dedicated to innovation and commercialization. In this connection, it is critical that the province coordinate with the federal government – including Ottawa's support for post-secondary research and industrial development. Provincial dollars allocated to innovation and commercialization will deliver greater results if they are linked to federal funds.

Apart from the points made above, *Outlook 2020* research has identified a few additional ideas that could improve BC's performance on innovation and commercialization:

- The province could set a high-level goal to double R&D spending as a share of GDP by 2020, and then determine, together with industry and post-secondary research institutions, a strategy to achieve the goal.
- Within the procurement budgets of the Health Authorities, funding could be earmarked to support market access for BC-based suppliers of innovative health products and technologies who currently find it difficult or impossible to sell locally.

⁶⁷ See Aled ab Iorwerth, "Machines and the Economics of Growth," Department of Finance Working Paper (March 2005); Dale Jorgenson, ed., *Economic Growth in Canada in the Information Age* (Ottawa: Industry Canada, December 2004); Andrew Sharpe, Someshwar Rao and Jeremy Smith, "An Analysis of the Labour Productivity Growth Slowdown in Canada Since 2000," *International Productivity Monitor* (Spring 2005).



- The province may wish to consider a tax exemption for commercialization, similar to that recently adopted by Ontario. Ontario has legislated a ten-year income tax holiday for companies formed in the province to commercialize intellectual property developed by qualifying Canadian universities, colleges or research institutes. The revenue cost to the treasury from such a program is expected to be small.
- To accelerate the commercialization of new ideas and technologies, the province could establish a program of Commercialization Fellowships, under which it would contribute a portion of the salary for post-doctoral and other graduates of science, engineering, technology and health-related programs, to work for up to two years with innovative BC companies.
- Given low private sector outlays on R&D, public agencies take on greater importance as sources of innovation, particularly in sectors such as energy, health care and agriculture. In the energy sector, BC Hydro, Powertech Labs, and the BC Transmission Corporation are significant players in the innovation ecosystem, with the capacity to commercialize new products and services that drive energy efficiency. There may be other sectors where public agencies can play a similar role.



V. CONCLUSION

One conclusion that emerges from this distillation of the papers and other research done for *Outlook 2020* is that BC has a decent foundation upon which to build. As we look out to 2020, the province appears to have several elements lining up in its favour. And while there are always threats on the horizon, the opportunities are abundant. From this, however, it does not follow that we can afford to take the future for granted. Indeed, failing to recognize how quickly the world is changing may be one of the biggest threats to BC's future.

If we had to identify one priority for the coming decade it is improving productivity. This is a multi-faceted, long-term goal that requires a coordinated effort on many fronts. It involves all industries and touches on a host of human capital issues as well as on the quality of infrastructure, openness to trade, and the character of the business environment, among other factors. Companies, entrepreneurs and workers are at the centre of the productivity challenge; government policy and public institutions are only part of the puzzle. Developing a framework to drive productivity gains is a subject that spans many of the *Outlook 2020* papers, certainly those which focus on specific industry sectors but also the papers which explore demographic change. And the productivity agenda is closely tied to the necessity of developing a more robust provincial export base.

While BC comes up short as a trade powerhouse compared to many other small regional economies, the diversity of its export portfolio and its orientation to the Asia Pacific are advantages. Any realistic strategy for a better economic future cannot overlook the critical importance of BC's resource endowments. Natural resources, including the technologies and innovations that increase the efficiency of their production and mitigate their environmental footprint, will continue to be a big contributor to our collective success. As global demand for minerals, metals, foodstuffs, and all forms of energy increases, BC's mining and energy industries are in an excellent position to capitalize. Realizing their potential, however, will require both smart public policies and sound business strategies. The forest sector is in a somewhat different position, but it too is poised for recovery and may benefit from significant reform.



Another critical factor influencing BC's economic well-being is the relentless shift to a knowledge-based society and economy. With its skilled workforce, high levels of immigration, and Gateway position, BC is making headway as a producer and exporter of professional services, high-tech products and services, sophisticated manufactured goods, and education and research. There may also be an opportunity to tap the potential of the health care sector – amounting to one-tenth of the economy – as a source of wealth creation, industrial development, and exports. Although we hesitate to trumpet it too loudly here, there is no denying that BC (and its most populous area, the Lower Mainland) offers an attractive natural setting and an enviable quality of life. As many jurisdictions around the world strive to become livable regions and magnets for talent, in many respects BC can claim to be at the front of pack.

Another conclusion from *Outlook 2020* is that BC's role as a Gateway to the Asia Pacific will continue to shape its evolution. As suggested earlier, we believe the province should look to expand on this by becoming a 'landing pad' for Asian businesses. With relatively low corporate taxes, good infrastructure, and an increasingly creative, multi-cultural population, there is no reason why BC cannot aspire to be a premier location for Asian businesses looking to establish a North America presence.

We have an additional comment on economic growth. The purpose and promise of economic progress is not to benefit a few. Healthy economic growth spreads the fruits of success widely. We do not want to become an economy in which essentially all of the income gains stemming from advances in technology, innovation and trade accrue to just 1% or 5% of the population – as some evidence suggests has occurred in the United States and some other countries. Arguably, economic growth is more sustainable if it is broadly-based.⁶⁸ This point is worth keeping in mind as work continues to develop a more prosperous and competitive British Columbia.

⁶⁸ Brookings Institution, [From Recession to Recovery to Renewal: An Economic Strategy to Achieve Broadly Based Growth](#) (April 2010).



Finally, we end with the idea, advanced by the Canadian Manufacturers and Exporters, that to flourish over the coming decade, BC will have to “develop a broad common vision, support expansion and diversification of key industrial clusters, accelerate the R&D share of GDP, and create a culture of innovation characterized by consensus-building and dense networks among companies, universities and research organizations.”⁶⁹ This statement captures as well as any many of the things that policy-makers, business decision-makers, educators and others in positions of leadership will need to direct more attention to in the post-Olympic decade.

Outlook 2020 has been an ambitious undertaking that produced a large and rich body of insights, data, and recommendations. Collectively as a province, there is more work to do to improve performance on early childhood development, education, training, and the integration of First Nations and immigrants into the economy and workforce.

How all of this gets accomplished is somewhat uncertain. What is clear, however, is that as the pace of economic and technological change increase, BC will have to step up efforts to compete and, indeed, to be relevant.

⁶⁹ Canadian Manufacturers and Exporters, “Manufacturing BC – Outlook 2020,” report prepared for the Business Council of British Columbia (2009).