

Setting our sights on Canada's 2020 Prosperity Agenda

REPORT ON CANADA 2008



Institute for

COMPETITIVENESS & PROSPERITY

How to contact us

To learn more about the Institute and the Task Force please visit us at: www.competeprosper.ca

Should you have any questions or comments, you may reach us through the web site or at the following address:

The Institute for Competitiveness & Prosperity
180 Bloor Street West, Suite 1100
Toronto, Ontario M5S 2V6
Telephone 416.920.1921
Fax 416.920.1922

Executive Director

James Milway

416 920 1921 x222

j.milway@competeprosper.ca

Researchers

Lance Bialas

416 920 1921 x228

l.bialas@competeprosper.ca

Usman Naeem

416 920 1921 x227

u.naeem@competeprosper.ca

Sana Nisar

416 920 1921 x223

s.nisar@competeprosper.ca

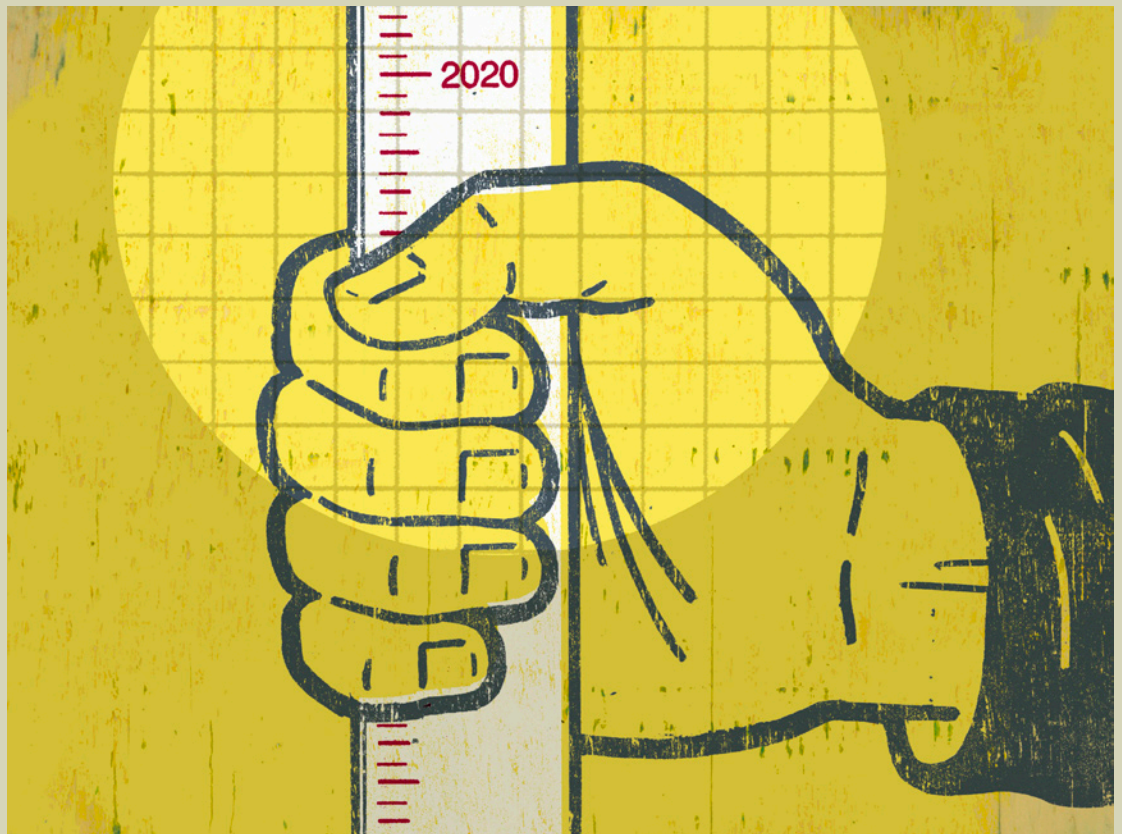
Daniela Scur

416 920 1921 x224

d.scur@competeprosper.ca

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Foreword and acknowledgements



I AM PLEASED TO PRESENT our Report on Canada 2008. This is the Institute for Competitiveness & Prosperity's fifth annual contribution to the important conversation on raising Canada's competitiveness, productivity, and prosperity.

This Report continues the themes from last year's Report on Canada, where we set out a long term Prosperity Agenda for Canada to achieve its economic potential by 2020. We continue to urge Canadian governments, businesses, and people to place a high priority on this important challenge. All Canadians need to be active partners in this effort, because our governments cannot tackle the 2020 Prosperity Agenda on their own. Continued complacency will hamper our progress.

We are pleased to see that there has been some progress on the Agenda. Federal corporate taxes are on a path to significant reductions. Some initiatives are in place to remove industry regulations that block innovation and to increase international trade. The federal government has recognized the importance of the Prosperity Agenda with its appointment of the Competition Policy Review Panel headed by Lynton "Red" Wilson. The Panel's mandate is to review key elements of Canada's competition and investment policies to ensure that they are working effectively in encouraging even greater foreign investment and creating more and better jobs for Canadians. This is an opportunity for Canadians to consider new approaches to enhancing Canada's competitiveness. We remain convinced that taking these kinds of steps toward the 2020 Prosperity Agenda is critical for Canadians.

As we show in this report, Canada is one of the most prosperous countries in the world, especially when compared to ones outside North America. But we continue to under achieve our prosperity potential as defined by Gross Domestic Product per capita.

We believe we could and should do far better, with significant benefits for all. Realizing our full potential would mean that our families could afford a better standard of living. Our governments could spend more on social and physical investments that would address poverty and ensure we leave our children a better Canada than we inherited. Our work also shows that missing our potential has costs for our most vulnerable citizens. Our prosperity gap results in more involuntary part-time jobs for those who need to work. It also means that those at the bottom of the economic ladder risk falling behind their US counterparts.

“Canada is one of the most prosperous countries in the world... but we continue to under achieve our prosperity potential”

If we want to realize our prosperity potential, Canada has to improve from being a global laggard in productivity growth and innovation to a leader. And, yes, all Canadians can be a part of initiatives in this transition.

We recommend placing a high priority on a few items. In taxation, we urge a fundamental rethink of how we tax. Recent announced reductions in the federal corporate tax rate and the ongoing demise of capital taxes across the country are positive developments. But these improvements are occurring in an environment of ongoing reductions around the world. Lowering taxes on business investment would stimulate greater economic activity in the private sector, thereby strengthening our economy.

An immediate priority for Ontario, Saskatchewan, Manitoba, British Columbia, and Prince Edward Island, which still have their own sales taxes, is to move toward harmonizing them with the federal goods and services tax and making them value added taxes. Research by others and us shows that this is the most effective tax change to stimulate investment and job creation.

On the personal tax side, we need to find ways of reducing the marginal tax burden on lower income Canadians and strengthening the incentives for work. The federal Working Income Tax Benefit is a step in the right direction. Beyond taxation, our recent research indicated the need for innovative investments targeted to reduce poverty among specific high risk groups, and we urge the federal and provincial governments to take up this challenge.

We have been heartened by the federal and provincial governments' recognition of the importance of post secondary education for competitiveness and prosperity. Public investment in education has started to ramp up after years of remaining flat, and student enrolments in post secondary education have increased. We are also encouraged by government commitments to expand skills development programs for immigrants and apprenticeship opportunities. In the coming year, we recommend deeper exploration of the balance between teaching and research in post secondary education to enrich the experience and efficacy of our educational system for our students.

Finally, looking at the structures that drive innovation and upgrading, we urge the government to encourage beneficial competitive pressure to stimulate innovation and to continue assessing whether Canada's innovation agenda is adequately supported in the area of management education. The Wilson Panel has been mandated to examine our structures and policies so that they help create an entrepreneurial advantage for Canada, and we look forward to their recommendations.

Canadians are currently concerned over the threat of an economic downturn or recession, and we share that concern. But we need to maintain the focus on our long-term competitiveness and prosperity. Now is not the time to reduce investments in our long-term prosperity or to pause in the efforts to make our markets more competitive. Nor should finance ministers be held hostage to the need to achieve surpluses and thus feel pressure to ease up on investments and tax reductions.

Realizing our prosperity potential is a marathon, not a sprint. We have been encouraged by many of the initiatives already taken by governments. But more needs to be done to engage Canadians in recognizing the importance of competitiveness and prosperity and to embark on new initiatives that continue the journey to realize our prosperity potential.

We gratefully acknowledge the funding support from the Ontario Ministry of Economic Development and Trade. We look forward to sharing and discussing our work and findings with all Canadians. We welcome your comments and suggestions.



Roger L. Martin

Chairman, Institute for Competitiveness & Prosperity
Dean, Joseph L. Rotman School of Management,
University of Toronto



Canada's 2020 Prosperity Agenda

We see a great need to continue to pursue the 2020 Agenda for Canada's Prosperity

IN OUR REPORT ON CANADA 2007, we drew on our accumulated research to set out an ambitious 2020 Prosperity Agenda to realize our full prosperity potential. The key challenge Canadians face is to take the actions that will drive an already successful economy toward its full potential. As in other walks of life, it is difficult to develop a shared determination unless there is a sense of urgency based on readily recognized problems.

Ironically, our success is our biggest barrier to accepting the prosperity challenge we have set out. More important, our economic success is good news – we do not have to take drastic, painful actions to set our economic course right. Nevertheless, despite growing concern about our current economic situation, we continue to conclude that our focus needs to be on the long term and taking serious action to realize our full prosperity potential.

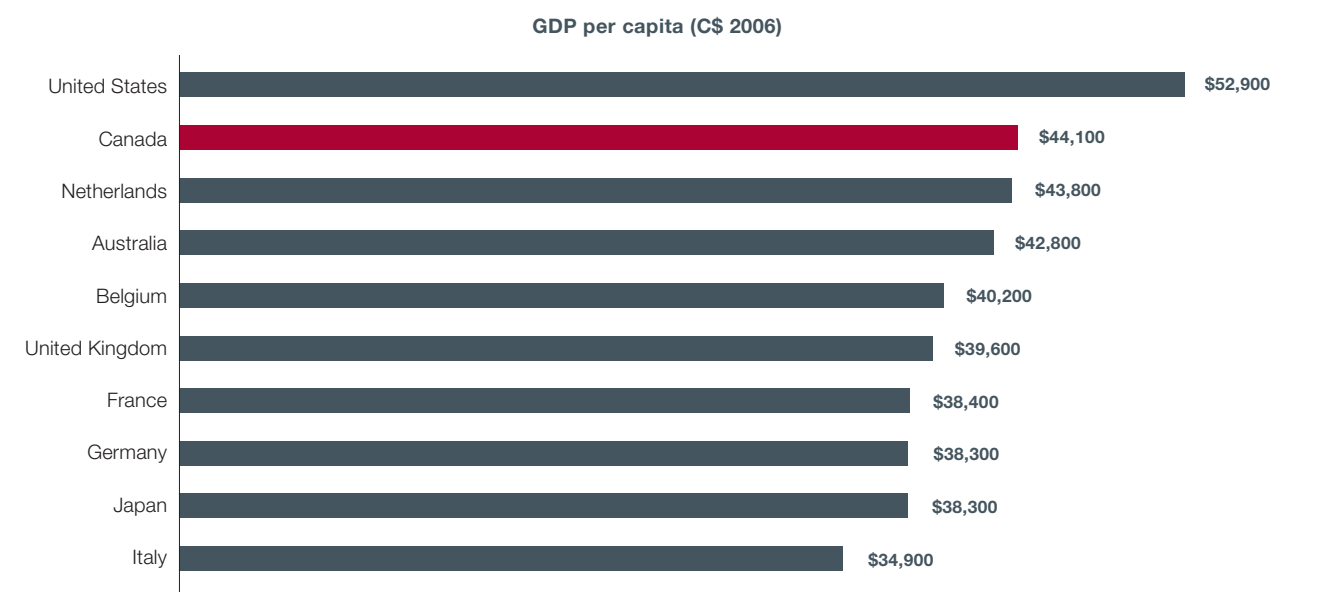
Canada out performs most other countries, but still falls short of its full potential

THERE IS NO DOUBT we have built a very competitive and prosperous economy here in Canada. Looking at countries with half our population or greater, we see only one ahead of us in Gross Domestic Product per capita¹ (*Exhibit 1*). This tracks our recent research in Ontario where we found that the province stands near the top in GDP per capita among a peer group of similar regions outside North America.² This success in a global setting is based on our highly skilled and culturally diverse work force, our mix of productive industries, and our macroeconomic strengths, including low inflation, low unemployment, and a balanced fiscal situation.

But the story is different in North America. When we look closer to home to determine Canada’s competitiveness and prosperity versus the United States, we still find unmet potential. Canada’s GDP per capita trails US GDP per capita by a significant margin – fully \$8,800 per capita in 2006 (*Exhibit 2*).

This \$8,800 difference represents prosperity potential that we are not achieving but should be aspiring to attain. In the not too distant past, the Canadian economy was performing much closer to the world’s leading jurisdiction. Since 1989, we have drifted further behind the United States. Our prosperity gap opened most dramatically during and after the 1990–92 recession, and we still have not recovered.

Exhibit 1 Canada’s GDP per capita is among the world’s highest



Note: Currency converted at PPP. Countries with population greater than 10 million.
 Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada; US Department of Economic Analysis – Bureau of Economic Analysis; and OECD.

¹ Throughout this report, we use constant 2006 Canadian dollars converted at Canada/US purchasing power parity exchange rate of 1.20 unless otherwise specified.
² Task Force on Competitiveness, Productivity, and Economic Progress, Sixth Annual Report, *Path to the 2020 Prosperity Agenda*, November 2007, p.8.

The prosperity gap reached its maximum in 1998 and fell until 2002, when it began to widen again. In 2006, the gap widened for the fourth year in a row, growing from \$8,600 in 2005.³

Given that our performance was much closer to that in the United States less than a generation ago, we think it is reasonable to conclude that the gap in per capita GDP is unmet potential. So, as satisfying as it is to see our success against countries outside North America, we continue to believe that we can do better still.

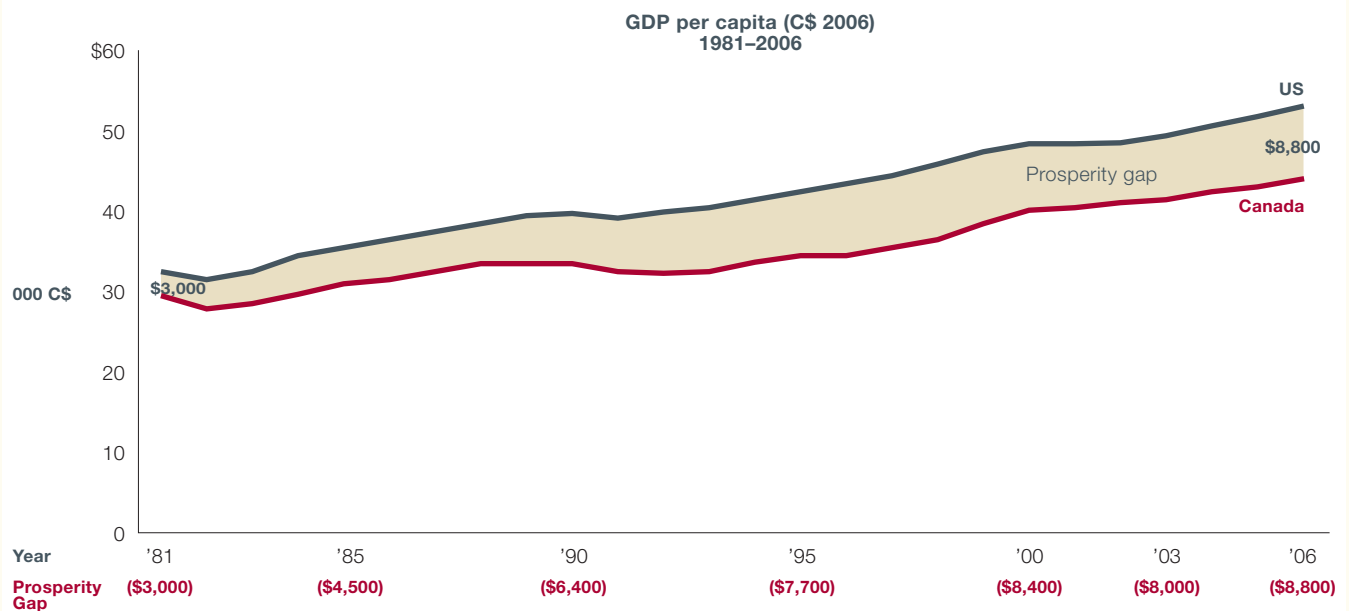
Canadians should not be complacent

BUT IS THIS UNMET POTENTIAL simply an abstract economic measure? What does it have to do with most Canadians?

A lot.

If Canada were successful in achieving its prosperity potential of closing the gap to its 1981 level of \$3,000 per capita, the average household in the country would see an increase in personal disposable income of \$7,800. This would readily pay for many important consumer spending items or investments in their future. For example, the average Canadian household with a mortgage pays \$10,500 annually; the average renting household pays \$7,300 to their landlords. The average

Exhibit 2 **Canada's prosperity gap has widened**



Note: Currency converted at PPP.

Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada; US Department of Commerce - Bureau of Economic Analysis; and OECD.

³ In Institute for Competitiveness & Prosperity, Report on Canada, *Agenda for Canada's Prosperity*, March 2007, we calculated the prosperity gap to be \$9,200 (2005 dollars). Minor re-estimates by government agencies in Canada and the United States, an update of the purchasing power parity (PPP) at which we convert US dollars into Canadian dollars, and a shift to a 2006 base have resulted in an adjusted 2005 gap of \$8,600 when expressed in 2006 Canadian dollars.

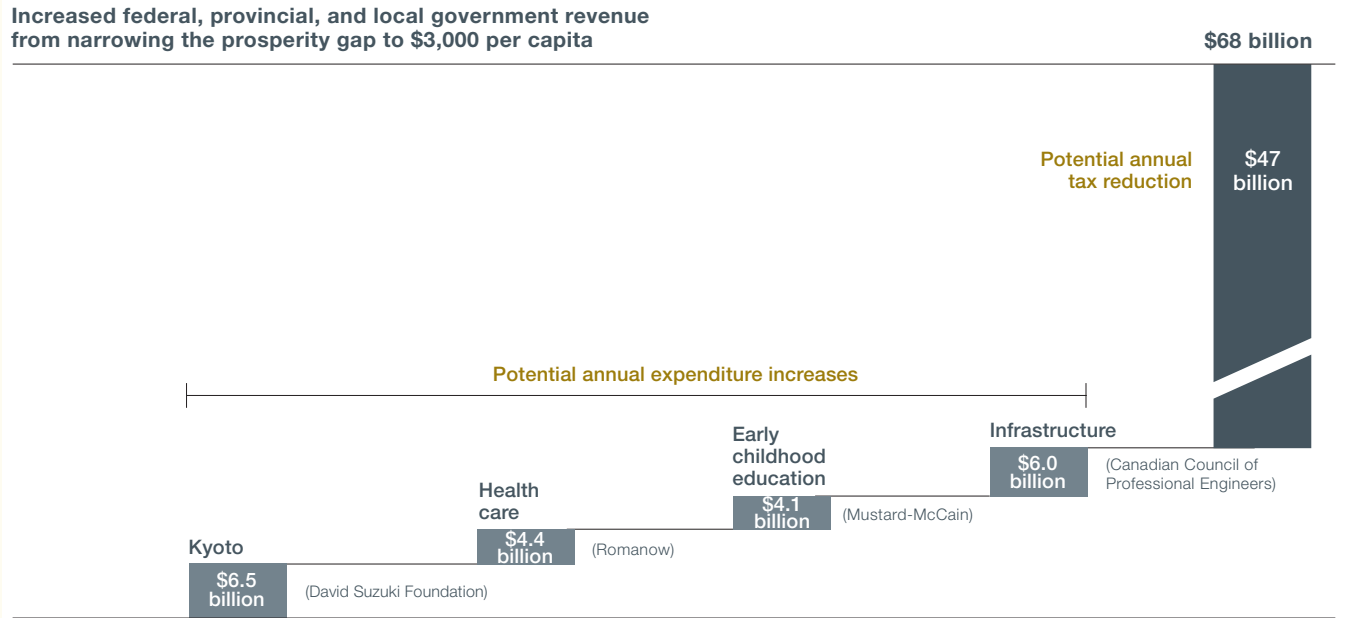
household spends \$4,000 on vacations and recreation. Those investing in post secondary education pay \$3,700 in annual tuition. Those contributing to an RRSP invest about \$3,500 annually. Except for mortgages, every one of these major expenses would be offset by the gain in our prosperity.

But would this help only those who are already winning in today's economy? No, quite the opposite. Returning the prosperity gap to its 1981 level of \$3,000 would generate an additional \$68 billion in revenue for the three levels of government across Canada. This would fund social and investment programs for the benefit of all levels of society. For example, it could easily pay for recommended increases in health care, early childhood education, and infrastructure – as well as a major tax reduction (*Exhibit 3*).

In fact, not meeting our prosperity potential has implications for Canadian families and individuals across upper, middle, and lower income groups. In the past year, the Institute for Competitiveness & Prosperity conducted research into the relationship between prosperity, inequality, and poverty. We found that, as we have fallen further behind our prosperity potential, more Canadians' incomes are falling behind those of their counterparts in the United States.

As our prosperity lead began to slip in the 1980s, after tax, after transfer income for well-to-do Canadian families at the 80th percentile fell behind that group in the United States. This gap has widened since then, especially during the recession of

Exhibit 3 Closing the prosperity gap affords increased public expenditure and tax reduction



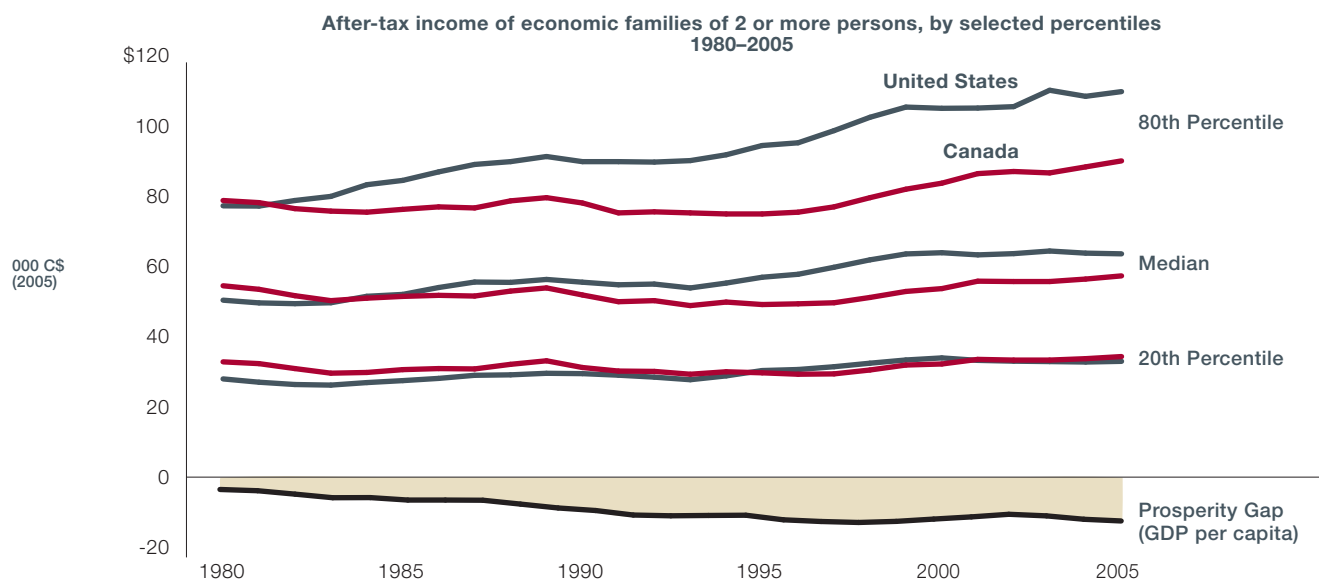
Source: Institute for Competitiveness & Prosperity analysis.

the early 1990s (*Exhibit 4*). Middle income Canadian families did better than their US counterparts until the mid 1980s when the growing prosperity gap caused them to fall behind. Then the gap widened until the turn of the century when the United States was hit harder by the dot-com recession, and the median income gap slightly contracted. Still, our growth has trailed US growth considerably.

Low income Canadian families at the 20th percentile of family income continue to out perform their US counterparts, but the margin is shrinking. In 1980, income for Canadian families at the 20th percentile exceeded that in the US group by \$4,800 per family. In 2005, this lead had fallen to \$1,350. It is a point of pride for Canadians that the structure of our economy, combined with our tax and transfer system, results in better outcomes for those at the bottom of the economic ladder. But we will be able to sustain this advantage and continue to protect the poorest Canadian families only if we reverse current trends in relative average prosperity.

Other research has shown the importance of realizing our prosperity potential for the economically vulnerable. In our research into hours worked, we found that a significant percentage of our labour force (relative to the United States) worked part time because they were unable to find full-time work. This was a more significant problem for less skilled Canadians. We found that this involuntary part-time gap was associated with sluggish economic performance.⁴

Exhibit 4 Income in Canada exceeds United States at bottom of distribution, but this advantage has faded



Note: US\$ converted to C\$ using the bilateral 2005 household consumption expenditure PPP.
 Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada; US Department of Commerce - Census Bureau, Annual Social and Economic Supplement of the Current Population Survey.

⁴ Institute for Competitiveness & Prosperity, Working Paper 9, *Time on the job*, September 2006.

We need strategies to benefit all Canadians

SOME CANADIANS ARE CONCERNED that rising prosperity will not lift all boats equally, but instead will primarily benefit upper income Canadians. Others go so far as to argue that it will hurt the economic prospects of lower income Canadians as we move toward what they fear may be a more Darwinian economy in which the rich get richer and the poor get poorer. Many point to the example of the United States which, among large developed countries, has the highest level of prosperity and one of the most unequal distributions of income.

An important question for us, then, is: Will an agenda of realizing our prosperity potential necessarily result in greater inequality? A related, but not the same question is: What is the relationship of increasing overall prosperity with the incidence of poverty? We need to understand how growth strategies to increase prosperity will affect inequality and poverty. Prosperity strategies that enrich only a few, or actually increase poverty, are of little interest to Canadians. Instead, we need the kinds of strategies that increase prosperity for as many Canadians as possible and make real inroads into poverty. These are important challenges to our prosperity agenda and were the driving force behind our Working Paper published in the past year, *Prosperity, inequality, and poverty*.⁵

Our research does show that inequality in Canada has been increasing in recent years, even though overall prosperity has been advancing. And it also confirms that the high level of prosperity is less equally distributed in the United States than in most other countries.

But our closer investigation reveals that, although we have experienced increasing inequality in the distribution of our prosperity, we are not alone. In fact, in recent decades the distribution of income has become more unequal in most developed economies. Researchers and academics continue to study this phenomenon, but an emerging consensus is that as the world's economies become even more sophisticated, highly skilled workers are simply more valuable and earn higher incomes. And the difference in economic rewards received by them and less skilled workers widens. As developing economies, like China and India, advance, we can expect that less-skilled workers in the developed economies will fall further behind.

There will also be greater competitive pressure on higher skilled workers, as China and India move up the value chain and compete on more sophisticated bases. Still, our talented individuals will be better able to adapt to changing competitive circumstances and will enjoy higher rewards than our lower skilled workers.

In effect, the increased inequality we are observing in most developed economies is mainly a consequence of changing market structures. It is not a necessary result of prosperity. In fact, we can find no strong link between higher prosperity and more or less equality of outcomes in the employment market. Nor do we observe a strong link between the level of prosperity and the equality of economic outcomes after considering government income redistribution policies.

⁵ Available on our website at: www.competeprosper.ca/index.php/work/working_papers/working_paper.

Consistent with the view that inequality is the result of higher rewards for skilled individuals, the evidence indicates that a greater percentage of income is flowing to the higher economic strata. But, our research indicates that the recent increases in inequality in Ontario are not coincident with increased poverty as measured by the percentage of Ontarians living below the low income cut off (LICO). Between 1980 and 1996, poverty and inequality did move in tandem – then, as prosperity was less equally distributed, a greater percentage of Ontarians found themselves not earning enough to secure life's necessities. But since 1996, as Ontario's economy has expanded, fewer Ontarians' incomes are below LICO. Yet, inequality has increased over the last quarter century.

We would argue that this is a better outcome than the alternative – less inequality and more poverty. But it is not good enough. We should strive for an economy that draws on all people's capabilities and creates economic success for everybody. Equality is not simply a measure of outcomes; it is also a measure of opportunities to contribute. And while the incidence of poverty may currently be relatively low, we can do better.

To understand poverty better, we need to dig below the surface because poverty is not a generic situation that affects Canadians at random. It occurs more frequently and persistently in six specific high risk groups in Canada: high school dropouts, recent immigrants, lone parents, the disabled, unattached individuals aged between 45 and 64, and Aboriginals. In fact, families with main earners in one of these risk groups are 3.7 times more likely to be

in the bottom quintile of earnings than other families. Canadians who are not members of these high risk groups are much less likely to be at the bottom end of earnings or in poverty – and are three times more likely to be in the highest income quintile.

We think it is much more important to focus public policy on reducing poverty among these high risk groups than to strive for greater equality by holding back opportunities for other Canadians. Since each of these groups is excluded from Canada's prosperity for its own reasons, each requires its own solution. To the extent we are not successful in helping individuals in these groups move out of poverty, we are hurting our future prosperity potential. Children in poverty are less likely than other children to invest in raising their skills and to benefit from the future prosperity higher skills would bring.

To be sure, Canada has an enviable record of intergenerational mobility. Compared to other developed economies, a person's current economic success in Canada is less related to parents' economic success. One third of our low income children become low income adults. This compares favourably to results in the United States, where nearly one half of low income children become low income adults, and in the United Kingdom, where this result holds for four in ten

But Canada's impressive intergenerational equality results will wane if we experience increasing child poverty. If we want to benefit from the talents of all Canadians, we need to ensure that all are participating to the best of their abilities in our economy. We think addressing issues of poverty and

inequality are inexorably linked to closing the prosperity gap and achieving our full prosperity potential.

Andrew Sharpe of the Centre for the Study of Living Standards has observed that the goal of economic policy is to create virtuous circles, where higher investment leads to higher prosperity and in turn to more investment in economic progress. Similarly, modern theories of economic growth emphasize the synergies between broad-based distribution of prosperity and investment in human capital.

More prosperity will lead to a greater ability to invest in people – in educational and skills development opportunities, in incentives to work, and in early childhood education. As we have seen, Canada's prosperity gap significantly reduces our ability to spend on public and private skill enhancing investments. To the extent we improve our prosperity and are able to make these investments, we will reduce poverty and, more importantly, increase the skills and capabilities of Canadians to increase prosperity. As we have found repeatedly in our work, our economic progress is based less on natural resources and work effort and more on our ability to thrive in a knowledge economy. It is unlikely that rewards for skilled workers will be declining in the near future. We need to ensure that we are drawing on all our collective skills and energies to realize our full prosperity potential.

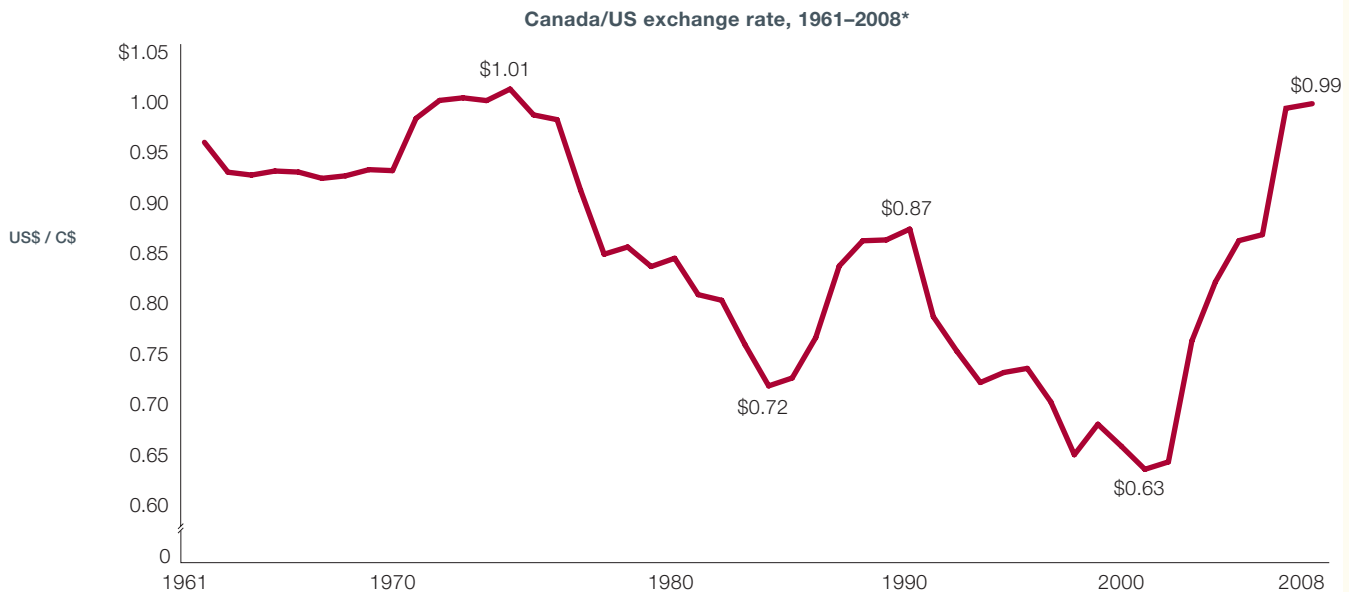
As we review our Agenda for Prosperity, we see nothing that necessarily increases inequality and poverty. In fact, we are confident that our agenda will help us achieve the virtuous circle that is our desired outcome. But we cannot falter.

Canada's prosperity gap could widen significantly

WITH OUR CURRENT LAGGING ECONOMIC MOMENTUM, we would fall further behind our prosperity potential in the coming years. This would be a slow, but steady drift behind the prosperity of the United States. But consistent with our past experience, the gap could widen even more significantly with a major economic discontinuity like the recession of 1990–92.

The recent rise in the Canadian dollar might be that discontinuity. Many are concerned about the impact on manufacturing employment – a foundation of Ontario's and Canada's prosperity. As we showed last year, the relationship between our prosperity gap and the rise and fall of the Canadian dollar is weak.⁶ Yet we have to acknowledge that the recent rise in the Canadian dollar vis-à-vis the US dollar is unprecedented over the last half century (*Exhibit 5*). The increase in the 1969–72 period was 7.8 percent, and in 1978–86 it was 26.2 percent. Since 2002, the Canadian dollar has strengthened more than 63 percent, or over 10 percent compounded annually. This dramatic growth is more important than the psychological impact of reaching above parity with the US dollar.

Exhibit 5 The current steep rise of the Canadian dollar is unprecedented



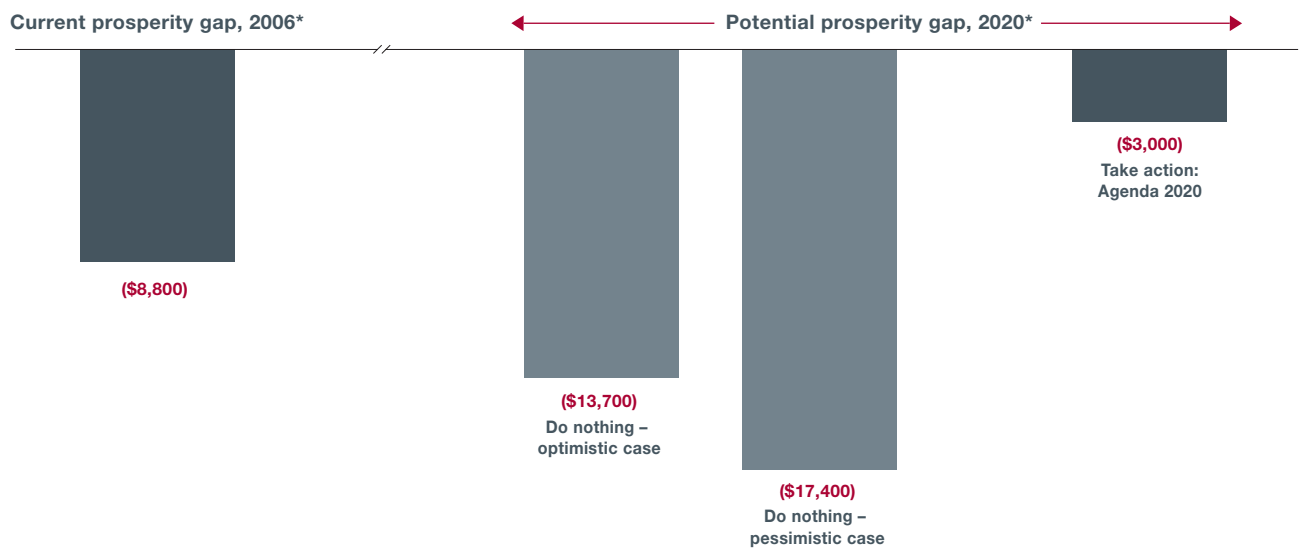
* Bank of Canada noon spot rate December averages. 2008 based on February average.
Source: Bank of Canada.

⁶ Report on Canada 2007, *Agenda for Canada's prosperity*, p. 26.

This rise of the Canadian dollar shows that our economic environment can change suddenly. We need to make sure that our economy is as robust as possible to withstand the buffeting winds of external forces. Not achieving our current prosperity potential means we are vulnerable to downturns.

By our estimates the current trends in productivity and intensity, the factors that account for most of the difference, could expand our prosperity gap from the current \$8,800 per capita to more than \$13,700 in constant dollars by 2020. But a recurrence of an adverse event like the 1990–92 recession could take the gap as high as \$17,400 (*Exhibit 6*).

Exhibit 6 Doing nothing entails significant prosperity risks for Canadians



*In constant 2006 Canadian dollars.
Source: Institute for Competitiveness & Prosperity analysis.

Keep our eyes on the 2020 Agenda for Canada's Prosperity

IN LAST YEAR'S REPORT ON CANADA, we set out the Agenda for Canada's prosperity as an approach for realizing our economic potential (*Exhibit 7*). The Agenda is based on our AIMS – attitudes, investment, motivations, and structures – framework for analyzing the elements of that potential. By its nature, the long term perspective of the Agenda means that it will take time to implement. In this year's plan, we specify an action plan for the coming year. We think this constitutes a realistic set of items for the governments in Canada to continue their existing work or to initiate new avenues for activity.

Exhibit 7 **The 2020 challenge: Agenda for Canada's prosperity**

THE GOAL	Current	Target 2020
Close the prosperity gap	\$8,800 behind the United States in GDP per capita	Cut the prosperity gap to \$3,000
Attitudes	Collective complacency	Shared determination to close the gap
Investment	Consume today	Invest for tomorrow's prosperity
Motivations	Unwise taxation	Smart taxation
Structures	Preserve status quo	Encourage creativity and growth

There has been some progress on the Prosperity Agenda over the last.

Attitudes. There is a greater recognition of the importance of Canada's competitiveness, perhaps brought on by the unease in some quarters over a perceived hollowing out of our corporate leaders, nervousness about an economic downturn, and concern about the harmful impact of the strengthening loonie. In the past, we have urged that Canadians raise the volume on the conversation about raising prosperity across the country. This year, the federal government appointed the Competition Policy Review Panel headed by Lynton "Red" Wilson. Its mandate is to review key elements of Canada's competition and investment policies to ensure that they are working effectively to encourage even greater foreign investment and to create more and better jobs for Canadians. This is an important opportunity for Canadians to consider new approaches to enhancing Canada's competitiveness.

Investment. Federal and provincial governments, particularly in Ontario, are recognizing the necessity of investing in education and have stepped up their funding after years of little real growth in investment.

Motivations. Federal corporate taxes are on a path to significant reductions, and provincial capital taxes are slowly disappearing.

Structures. Some initiatives are in place to remove industry regulations that block innovation and to increase international trade.

We remain convinced that taking these kinds of steps toward the 2020 Prosperity Agenda is critical for all Canadians. Obviously, still much more needs to be done on each of these four factors to increase Canada's competitiveness and prosperity.

Attitudes: Accept the challenge; overcome complacency

Public research conducted last year indicates that Canadians are concerned about whether future generations will enjoy a higher standard of living than we do. It also indicates that we do not want economic growth simply to match US results. However, a majority of Canadians agree that our unmet prosperity potential is a problem that requires action soon or even immediately. We encourage the Prime Minister, premiers, and business, civic, and academic leaders to raise the profile of our unmet prosperity potential with Canadians. We can no longer be complacent.

Investment: Focus on people and technology

A recurring theme from our work has been the need to step up our investments for future prosperity, and we are heartened by the increased expenditure on education by governments across Canada, particularly in Ontario. Yet we need to make certain that education is adequately funded. Over the past decade and a half, governments in Canada have significantly shifted public spending balance away from education toward health care – and we need to correct this imbalance.

But we also are suggesting that the governments and academic leaders evaluate the balance between research and teaching in our universities. We are concerned that the public policy emphasis on research and development in our universities is coming at the expense of the quality of the student experience, as evidenced by student surveys and student to faculty ratios. Universities contribute to innovation and prosperity not simply by doing research, but also by educating and training our future scientists, managers, and citizens. As we acknowledge in this Report on Canada, our latest research is indicative, not conclusive – but we think it is worth understanding whether or not we have the right balance between research and time spent teaching students.

We also urge governments to establish that their current investments in reducing poverty are as productive as they can be. In the past year, we deepened our understanding of the relationship between overall prosperity and inequality and poverty. We were struck by the incidence of poverty among some specific groups – high school dropouts, recent immigrants, lone parents, the disabled, unattached individuals, and Aboriginals. These groups account for a significant percentage of low income Canadians; each has its own poverty challenges. We encourage the federal and provincial governments to review their current poverty agendas to ensure that they have the appropriate balance between general and targeted programs.

Motivations: Pursue smarter taxation

Much of the taxation challenge for governments in Canada lies at the provinces' doorsteps. We renew our call for immediate elimination of the capital tax, where it still exists. We urge the provincial governments in the five provinces that have not yet harmonized their provincial sales taxes with the federal GST to do so as quickly as possible. A value added tax is the most conducive to investment and prosperity. The federal government's reduction of the GST to 5 percent in its recent economic update is an unwise move. Through harmonization, the provincial governments can mitigate some of the harm the GST reduction will do to investment and job creation.

On the personal side, we continue to urge the federal and provincial governments to find ways to reduce the high effective marginal tax rates faced by lower income Canadians. As they try to move up the economic ladder, they can face punishingly high effective marginal tax rates because they lose their qualification for certain tax benefits as their incomes rise through tax brackets. This is a challenging issue to address as the objectives of targeting credits and benefits to lower income Canadians conflict with the need to have positive incentives for work. There are no easy solutions. The federal Working Income Tax Benefit is a step in the right direction.

Structures: Place a premium on creativity and innovation

We see two priorities for strengthening market structures for innovation and prosperity in Canada.

First, we encourage governments to find ways to increase competitive pressure. Too many of our important economic sectors are overly sheltered from the beneficial effects of foreign competition and investment. Yet study after study shows that our innovation performance and the well being of our citizens would improve if we removed these shelters. Our work in Toronto's financial services clusters this past year identified the negative impact of our regulatory framework. We will not achieve global leadership in financial services as long as we are not open to the full array of global competitive pressure.

Second, we encourage the ongoing assessment of the importance of management capabilities in our innovation policy. We conclude that successful innovation comes from the interaction of both general and specialized support and competitive pressure. We need to continue to produce qualified scientists and engineers, as well as publicly support research and development. And we need to build the sophistication of our management cadre. Recently released federal innovation strategies continue to be based on the premise that more research in the areas of science and technology is the solution to our lagging innovation performance in Canada.⁷ We urge that innovation policy be equally informed by the importance of management education and research.

Implementing these two initiatives is important to improving our overall competitiveness, and we are confident that the Competition Policy Review Panel will make recommendations to effect positive change.

Canadians live in one of the most prosperous and dynamic economies in the world. This is the legacy of previous generations and the fruits of our own efforts today. But if we want our children to inherit an economy that is thriving – not just surviving – in a global setting, we need to accept the challenges of meeting our prosperity potential. The Agenda for Canada's Prosperity is aggressive. We should not lose sight of it now.

⁷ Industry Canada, "Mobilizing Science and Technology to Canada's Advantage," June 13, 2007. Available online at: www.ic.gc.ca/cmb/welcomeic.nsf/532340a8523f33718525649d006b119d/3e7f6374fd018f9c852572de00503b8a?OpenDocument

Productivity and Canada's prosperity potential



Missing our prosperity potential is a lost opportunity for all Canadians

IN CARRYING OUT ITS MANDATE to measure and monitor Canada's competitiveness and prosperity, the Institute has focused on Gross Domestic Product (GDP) per capita as the summary measure of success. GDP represents the value added to our endowed base of human, physical, and natural resources. The value we add is driven by our ability to develop and produce products and services that others want to buy across Canada and around the world.

Prosperity can be raised by expending more labour effort to increase the goods and services produced in Canada. It can also be raised by being more productive. Productivity growth comes about by finding more efficient ways to produce the same amount of goods and services with the same effort; or by creating higher value added products, services, and features for which consumers will pay higher prices.

GDP is an imperfect measure. It does not measure quality of life or happiness. It focuses strictly on things that can have a dollar value attached to them. And it does not place a value on leisure time. But it is useful to the extent that a more prosperous economy creates the opportunity for greater quality of life through better health, increased life expectancy, and literacy. And, as long as we maintain the perspective that our focus is on competitiveness and prosperity – which are by nature economic concepts – we conclude that GDP per capita is a sound measure of economic results.

Canada has an enviable prosperity position. Among countries with a population that is similar to or greater than Canada's, no country outside North America out performs Canada in GDP per capita. But closer to home we continue to trail considerably our neighbour to the south, the economy that most resembles our own. In 2006, the prosperity gap with the United States was \$8,800 in GDP per capita.

Canada's prosperity gap was much smaller twenty-five years ago, when Canada's economic results compared more favourably with those in the United States. Starting with 1990–92 recession, Canada began to fall behind, and we have not been able to resume our earlier standing. This prosperity gap matters to Canadians. It represents lost potential for individuals and families to gain economic security and well being and for our public institutions to provide services and investments for future prosperity.

Lagging intensity and productivity remain the biggest hurdles

To understand the reasons behind our prosperity gap with the peer jurisdictions, we draw on the same framework we have used in our previous reports.

This framework disaggregates GDP per capita into four measurable elements (*Exhibit 8*):

- **Profile:** Out of all the people in a jurisdiction, what percentage are of working age and therefore able to contribute to the creation of products and services that add economic value and prosperity?

- **Utilization:** For all those of working age, what percentage are actually working to add to economic value and prosperity? To gain further insight into this element we examine the two contributors to utilization: **participation**, the percentage of those of working age who are searching for work, whether they are successful or not; and **employment**, the rate at which those participating in the job market are employed.

- **Intensity:** For all those who are employed, how many hours do they spend on the job in a year? This element measures both workers' desire to work more or fewer hours and the economy's ability to create demand for work hours.

- **Productivity:** For each hour worked in a jurisdiction, how much economic output is created by its workers? Within productivity there are six sub-elements and a productivity residual:

Cluster mix – how the mix of industries into traded clusters, local industries, and natural resources affects our productivity potential;

Cluster content – the productivity potential of the sub-industries that make up our clusters of traded industries;

Cluster effectiveness – how well our clusters of traded industries compete;

Urbanization – the proportion of our population that lives in urban areas, which typically increases a jurisdiction's productivity;

Exhibit 8 Institute measures four components of prosperity

Prosperity		Profile		Utilization		Intensity		Productivity
GDP per capita	=	Potential labour force	X	Employed persons	X	Hours worked	X	GDP
		Population		Potential labour force		Employed persons		Hours worked
				<ul style="list-style-type: none"> • Participation • Employment 				<ul style="list-style-type: none"> • Cluster mix • Cluster content • Cluster effectiveness • Urbanization • Education • Capital investment • Productivity residual

Source: Adapted from J. Baldwin, J.P. Maynard and S. Wells (2000). "Productivity Growth in Canada and the United States" *Isuma* Vol. 1 No. 1 (Spring 2000), Ottawa Policy Research Institute.

Education – the educational attainment of our population and its impact on productivity;

Capital investment – the degree to which physical capital supports our workers’ productivity;

Productivity residual – a residual value that relates to productivity but remains unexplained.

Note that the first three factors – profile, utilization, and intensity – add up to our labour effort, or the hours worked per capita. That captures the human effort Canadians are expending to create economic value. The fourth factor – productivity – measures how effectively our labour efforts turn resources into economic value and prosperity. Canada’s divergence from the US prosperity performance occurred during

the recession of the early 1990s. During that time the key factor driving our economic weakness was lower labour effort, especially utilization and its two sub-elements, participation and employment. Since 1997, we have been successfully recovering to 1990 performance levels. But, at the same time, a growing productivity gap has emerged relative to the United States. If we are to close the prosperity gap, the Agenda for Canada’s Prosperity has to be a priority for all stakeholders.

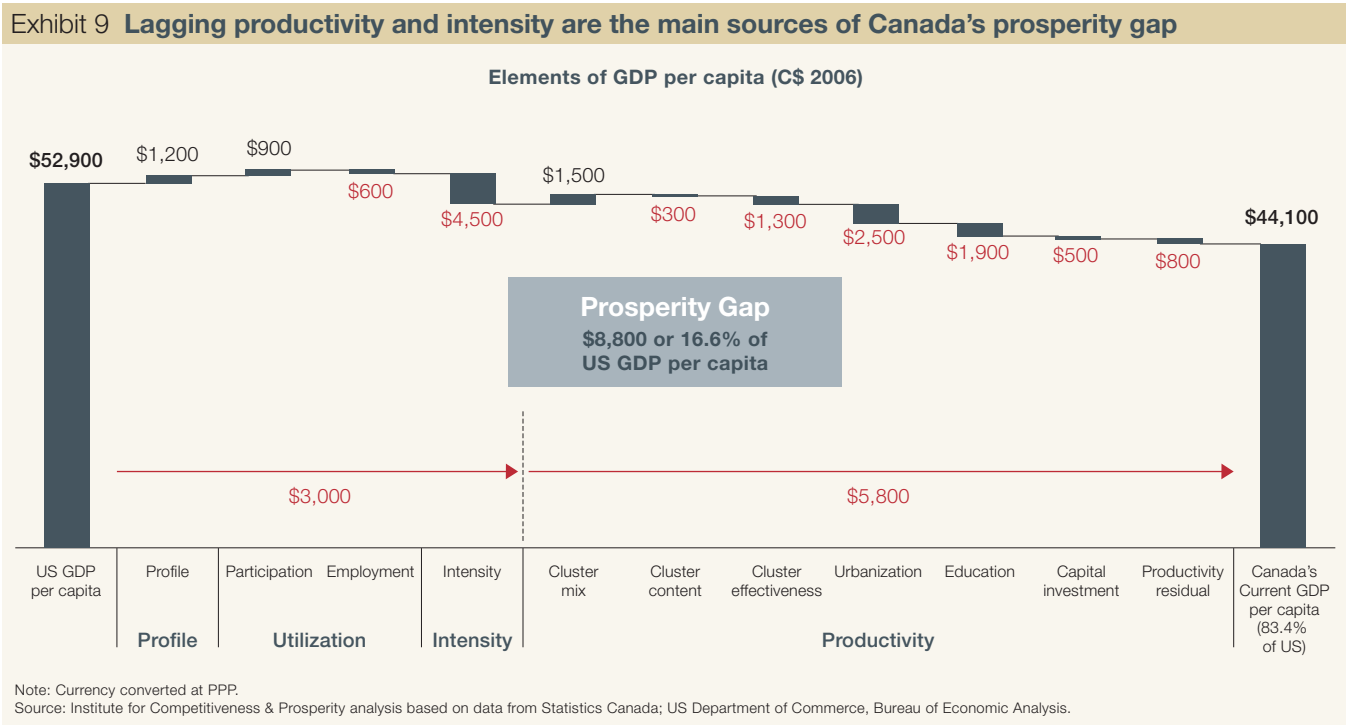
Canada has mixed labour effort performance

Canada continues to have a demographic profile advantage versus the United States, an advantage in utilization, but a significant intensity gap.

Profile remains an advantage for Canada

The first factor in a jurisdiction’s prosperity creation potential is its demographics. The percentage of the population that is of working age – aged 15 to 64 – is a base for prosperity. With more people in that age range, a higher percentage of the population can work and create economic value. In Canada, this ratio has been stable over the short run and has had no appreciable impact on changes in our prosperity gap versus the United States. Nevertheless, it does create an ongoing starting advantage in Canada’s prosperity.

In 2006, 69.5 percent of Canadians were aged 15 to 64, while in the United States this proportion was 67.3 percent. Relative to the United States, therefore, Canada had a 3.2 percent



potential profile advantage.⁸ Holding all other factors constant, we calculate this advantage to be worth \$1,200 in per capita GDP, because we have a higher proportion of our population able to add to our prosperity (*Exhibit 9*).

Demographic projections indicate that the proportion of Canadians of working age will decline over the coming years as baby boomers retire and are not being replaced by equal numbers in subsequent generations. We estimate that by 2025 the projected smaller percentage of working age Canadians will reduce GDP per capita potential by \$3,200.⁹ As we discussed in our Working Paper on intensity released in 2006, we will need creative retirement solutions to address this decline in our prosperity potential.¹⁰

Canada out performs the United States in utilization

As we discussed in the Report on Canada 2007, Canada successfully reversed a decline in its utilization of its working aged population during the latter part of the 1990s. Slightly more adults are utilized in the work force in Canada than in the United States.

In 2006, our participation rate was higher than that in the United States, with 67.2 percent of Canadians 15 years of age and older¹¹ working or seeking work. The US participation rate was 65.5 percent. This 1.7 percentage point advantage translates into \$900 in GDP per capita.

In the other component of utilization, employment, Canada has traditionally trailed the United States, but this gap accounts for only a small part of our prosperity gap. In 2006, 93.2 percent of the Canadian labour force was employed – 1.5 percentage points lower than the United States. This cost us \$600 in lower GDP per capita.

In 2006, Canada employed 62.7 percent of its working age population, above the US rate of 62.0 percent. This superior performance translates to a \$300 utilization advantage (the net effect of a \$900 participation advantage and a \$600 employment disadvantage) in GDP per capita.

Intensity is a significant part of our prosperity gap

While Canada out performs the United States in profile and utilization, we have a significant intensity gap – our workers work fewer hours in a year than their counterparts in the United States. In 2006, the average Canadian worker was on the job 1,694 hours compared with 1,874 hours for the average US worker. This gap of 180 hours, or 5 weeks annually, widened from 2000 when Canada trailed the US median by 140 hours weekly or 4 weeks. Consequently, the importance of intensity on Canada's prosperity gap grew from \$3,200 in 2000 to \$4,500 in 2006, and is the second highest source of our prosperity gap after the productivity gap of \$5,800.

In our research, we found that nearly half of the intensity gap is due to more weeks of vacation taken by Canadian workers, and a little over half is due to fewer hours worked when workers are on the job.¹² Within this shorter work week, we found that the largest component, about half, was the result of more Canadians working part time. This gap, in turn, was due to an inability of our part-time employees to find full-time work. Fully 32 percent of part-time workers in Canada across the 1997-2004 period indicated that they worked part time because they could not find full-time work. Across the United States this proportion was only 16 percent. Much of our intensity gap reflects the desires of Canadians to take more vacation, which is a preference, not a weakness, in our economy.¹³ But nearly a quarter of the gap is because our economy does not create adequate opportunities for full-time work.

Higher productivity continues to be the key to closing Canada's prosperity gap

Over the last decade, productivity has accounted for the greatest share of the prosperity gap with the United States. In the last year, our productivity gap has closed very slightly. However, both intensity and utilization have fallen back versus the United States. The net effect is a widening of the prosperity gap (*Exhibit 10*).

We assess the six sub-elements of productivity to determine the impact of this key driver of our prosperity gap.

⁸ Calculated as $[1 \text{ minus } (67.3 \text{ (US)} / 69.5 \text{ (Canada)})] = 3.2 \text{ percent}$.

⁹ This comparison is between Canada's GDP per capita in 2006 and its potential in 2025, not the difference between Canada and the United States.

¹⁰ Working Paper 9, *Time on the job*, p. 21.

¹¹ Labour statistics base participation, unemployment, and hours estimates on all workers including those who are 65 and over; we follow this convention for utilization and intensity.

¹² Alberto Isgut, Lance Bialas, and James Milway, "Explaining Canada-U.S. differences in hours worked," *International Productivity Monitor*, No. 13, Fall 2006, pp. 27-45. For Ontario versus peer states comparison see Working Paper 9, *Time on the job*.

¹³ Working Paper 9, *Time on the job*, p. 34.

Cluster mix contributes positively to our productivity

The Institute continues to conclude that Canada benefits from a good cluster mix of traded industries¹⁴ that are typically concentrated in specific geographic areas and sell to markets beyond their local region. Research by Michael Porter of the Harvard-based Institute for Strategy and Competitiveness has shown that clusters of traded industries increase productivity and innovation. In addition, the presence of clusters in a region has a spillover effect, in that they typically generate opportunities for increased success of the local economy.

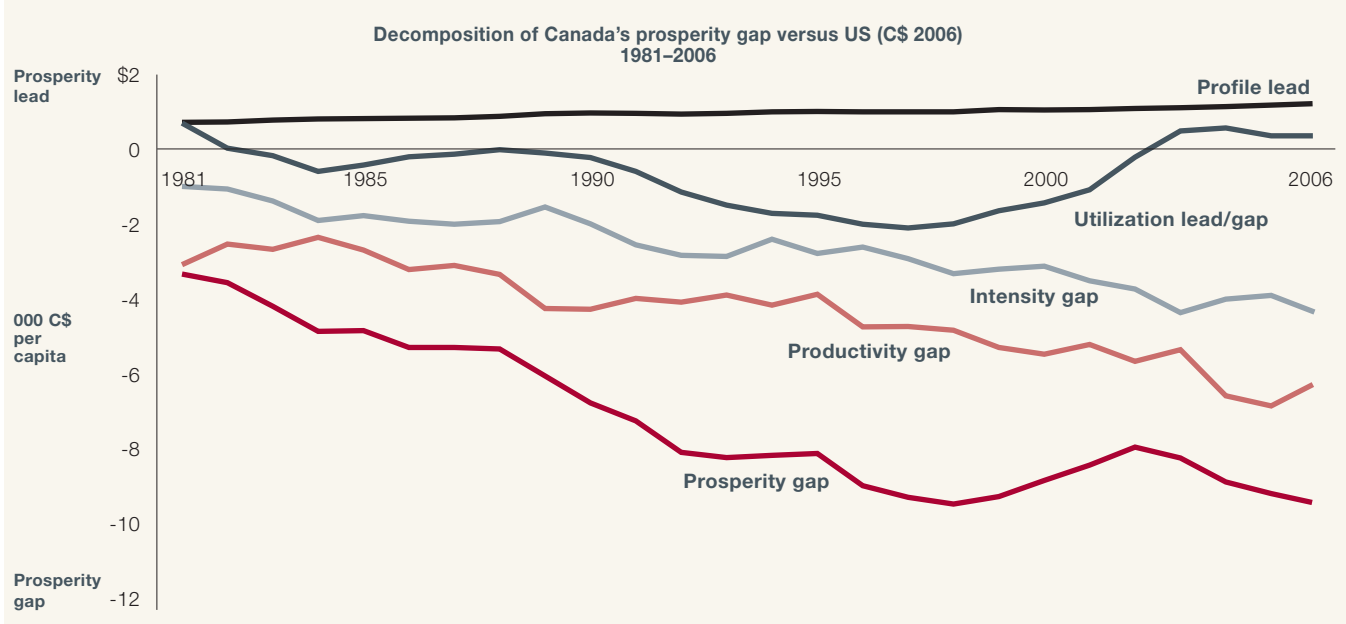
Drawing on Porter's methodology, the Institute has determined that fully 37.0 percent of employment in Canada is in traded industries versus 30.5 percent in the United States. Canada's employment strength in financial services, automotive, metal manufacturing, publishing and printing, and others has created an attractive mix of traded industries. Our analysis of Canada's cluster mix indicates a \$1,500 per capita advantage over the United States. This benefit is derived from a higher output than would be likely if Canada's mix were the same as the US mix.¹⁵ In the sub-clusters that make up each cluster of traded industries,¹⁶ there are also wage and productivity differences. As we compare these with those in the United States, we conclude that our cluster content creates a \$300 disadvantage for Canada.

Cluster under performance is a big part of Canada's productivity gap

While Canada has an excellent cluster mix, cluster effectiveness is lower here than in the United States. In Canada and the United States, traded clusters are more productive than local industries, as represented by wages. In Canada, the productivity premium is 42 percent.¹⁷ But across the United States, the productivity premium is 57 percent. Taking the prevailing wage in local industries as a given, our clusters are under performing their counterparts in the United States by 11 percent (the difference in the US performance index of 1.57 versus Canada's 1.42).

Porter has observed that greater competitive intensity comes from sophisticated customers and vigorous rivals. In addition, specialized support

Exhibit 10 Growing productivity gap drives Canada's prosperity gap



Note: Currency converted at PPP. Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada; US Department of Commerce – Bureau of Economic Analysis; US Department of Labor – Bureau of Labor Statistics; US Census Bureau; OECD.

¹⁴ Institute for Competitiveness & Prosperity, Working Paper 1, *A View of Ontario: Ontario's clusters of innovation*, April 2002 and Institute for Competitiveness & Prosperity, Working Paper 5, *Strengthening structures: Upgrading specialized support and competitive pressure*, July 2004.
¹⁵ It is important to note that our measure focuses on the mix of industries only. It calculates the productivity performance we could expect in Canada if each cluster were as productive as its US counterpart. It does not measure the effectiveness of each cluster in Canada.
¹⁶ Working Paper 1, *A View of Ontario*, pp. 18-20.
¹⁷ Working Paper 5, *Strengthening structures*, p. 26.

from excellent factor conditions, capable suppliers, and related industries pushes productivity higher in traded clusters. Our research over the past few years indicates that structures of specialized support and competitive pressure are inadequate relative to the experience in clusters of traded industries in the United States.

If Canadian clusters were as effective as US clusters, wages would be \$4,900 per worker higher. As traded clusters account for 37.0 percent of Canadian employment and given the relationship between wages and productivity, our overall productivity would rise by 5.1 percent. From this, we estimate the productivity loss from our weaker clusters to be \$1,300 per capita.¹⁸

Adding together the effects of cluster mix (+\$1,500), content (-\$300), and effectiveness (-\$1,300) Canada's clusters account for a net loss of only \$100 in GDP per capita versus the United States.

Relatively low urbanization is a significant contributor to our productivity and prosperity gap

Urban economists and geographers have concluded that higher levels of productivity result from greater rates of urbanization. This is because of the increased social and economic interaction of people in firms in metropolitan areas, the cost advantages of larger scale markets, and a more diversified pool of skilled labour. The interplay of these factors promotes innovation and growth in an economy.

Since a smaller percentage of Canadians live in metropolitan areas than in the United States, our relative productivity and prosperity potential are reduced (see *Prosperity and productivity lag in Canadian cities*). Our analysis this year indicates that we have a \$2,500 per capita disadvantage against the United States related to our lower level of urbanization.¹⁹ Note that this disadvantage is lower than what we have found in previous reports.²⁰ The improvement we report is thus due more to better data than to a performance improvement.

Lower educational attainment weakens our productivity

Economists agree that a better educated workforce will be more productive. Education increases workers' base level of knowledge necessary for improved job performance. It increases workers' flexibility so that they are able to gain new skills throughout their lifetime. Many studies show that increased wages accrue to more highly educated individuals.²¹ And higher wages are the result of higher productivity (see *Why productivity is important for our prosperity*). Canada's population has, on average, a lower level of educational attainment compared to those living in the United States, particularly at the university graduate level. Adjusting the mix of educational attainment in Canada to match the US mix and holding wages constant at each attainment level, Canada's productivity would be higher by \$1,900 per capita.

Under investment in capital lowers productivity

Canadian businesses have under invested in machinery, equipment, and software relative to their counterparts in the United States so that the capital base that supports workers in Canada is not as modern as that of their counterparts in the United States. As a result, Canadian workers are not as productive. We estimate this under investment in capital equipment lowers Canada's productivity by \$500 per capita. This estimate is based on our simulation of Canadian GDP if we had matched the rate at which the US private sector invested in machinery, equipment, and software. For our estimate, we assumed that higher growth in this investment would translate directly into higher growth in GDP. The primary source of this capital investment gap is in information and communications technology (ICT). Canada's businesses invest about a third less per dollar of GDP in ICT and slightly more in non-ICT machinery, equipment, and software.

The residual is related to productivity

We have been able to account for the impact of profile, utilization, and intensity on prosperity. We have also accounted for the effects of several elements of productivity. The \$800 per capita gap that remains is related to productivity on the basis of like-to-like cluster mix and strength, urbanization, education, and capital intensity.

¹⁸ We have netted out the effects of Canada's lower urbanization, our under investment in capital, and our lower educational attainment in this calculation.

¹⁹ See Task Force on Competitiveness, Productivity and Economic Progress, First Annual Report, *Closing the prosperity gap*, November 2002, p. 26 for a discussion of our methodology in measuring the productivity disadvantage resulting from our lower rate of urbanization.

²⁰ The difference is the result of the addition by Statistics Canada of six new Census Metropolitan Areas based on the 2006 Census. The addition of these cities raises the percentage of Canada's population living in metropolitan areas from 65.3 to 68.0 percent. The six new CMAs are Barrie, Guelph, Brantford, and Peterborough in Ontario; Moncton in New Brunswick; and Kelowna in British Columbia.

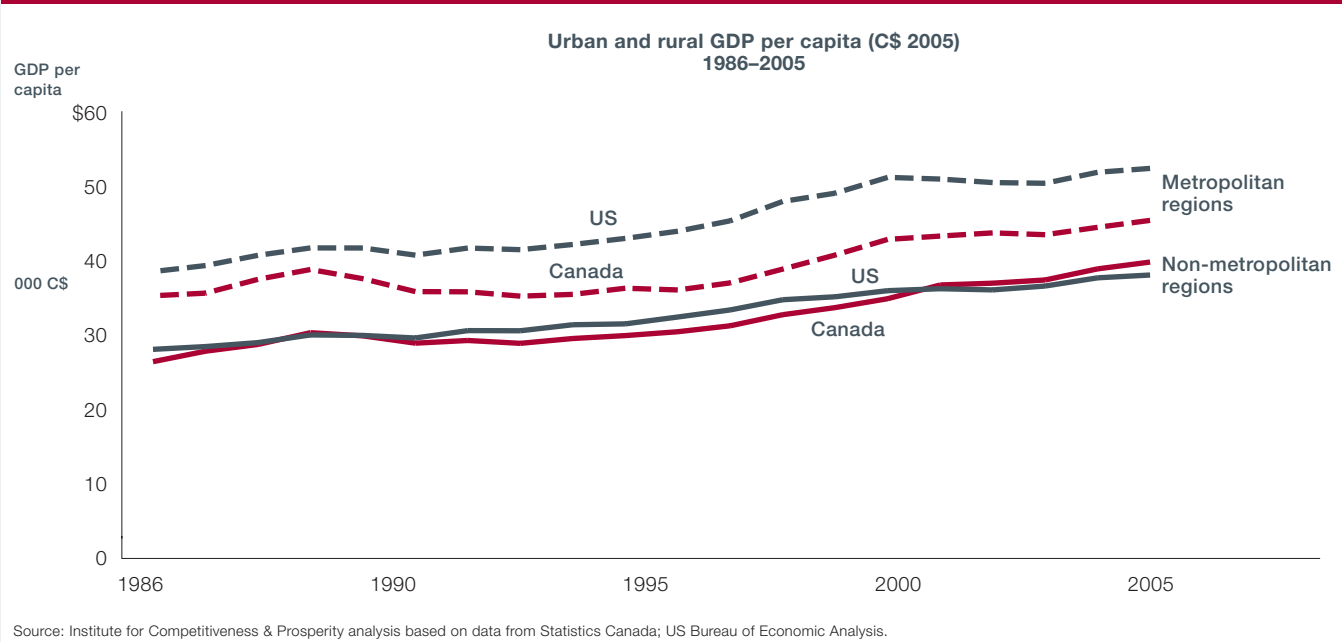
²¹ For example, see Ana W. Ferrer and W. Craig Riddell, "The Role of Credentials in the Canadian Labour Market," *Canadian Journal of Economics*, 2002 Vol. 35, No.4 and Statistics Canada, "Education and earnings," *Perspectives on Labour and Income*, 2006 Vol. 38, No. 03.

Prosperity and productivity lag in Canadian cities

URBANIZATION IS A SIGNIFICANT FACTOR in a region's productivity and prosperity. As we have seen, the percentage of Canada's population living in metropolitan areas (CMAs) lags the rate in the United States. But it is our metropolitan areas that account for the prosperity gap (*Exhibit A*).

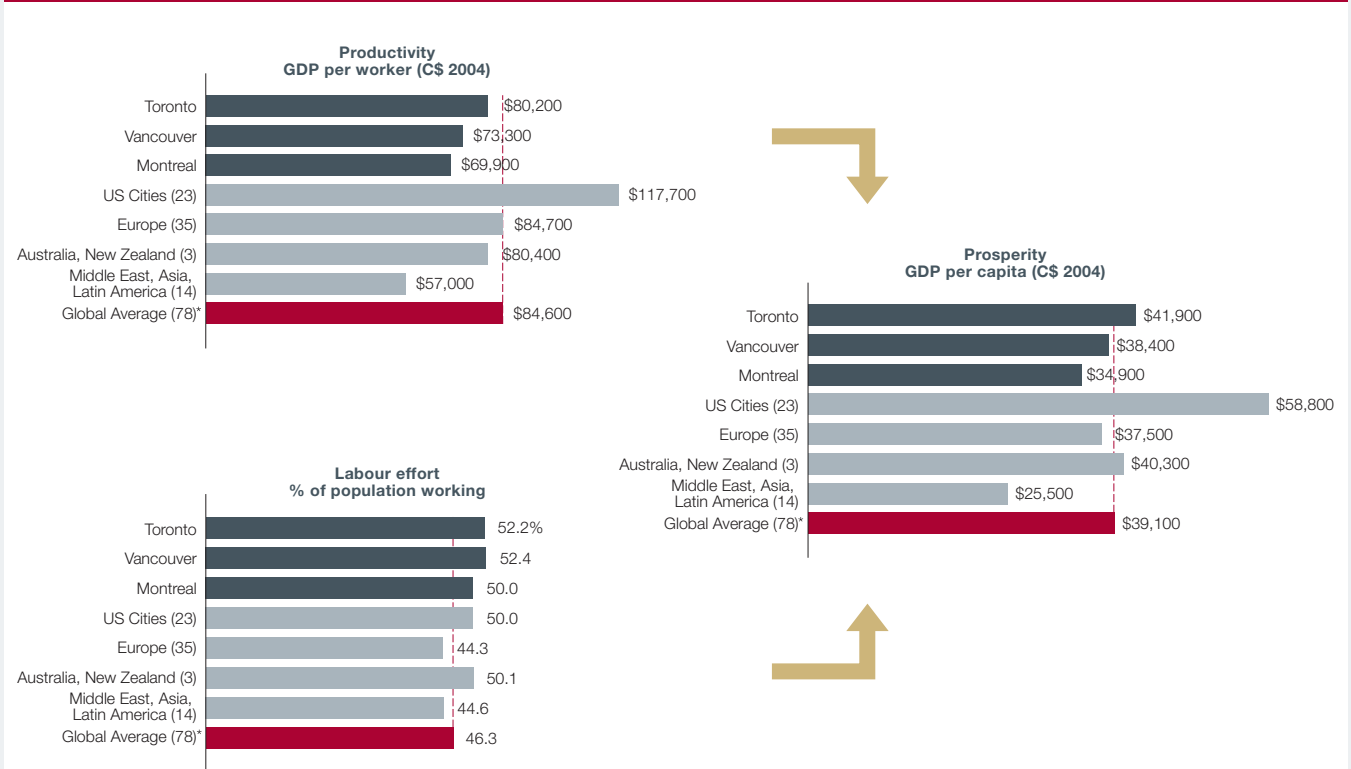
Per capita GDP in Canada's CMAs trailed US metropolitan areas by 13.5 percent in 2005. At the same time, GDP per capita in non-metropolitan areas was higher in Canada than in the United States by 4.6 percent. All of the growth in Canada's prosperity gap has occurred in our city regions. Clearly, realizing our prosperity potential must come from improving economic performance in our city regions.

Exhibit A Trailing CMAs in Canada account for the prosperity gap



Internationally, our largest metropolitan area, Toronto, is in the middle of the global pack in GDP per capita – it ranks 36th out of the largest 78 global metropolitan areas (*Exhibit B*). Vancouver and Montreal rank 44th and 49th respectively. Together, the three cities' prosperity falls just below the global average, but still ahead of the top 35 European cities. As with Canada, Toronto, Vancouver and Montreal do well against city regions outside North America – ranking 13th, 21st, and 26th out of 53 respectively. Inside North America, they trail all 23 US cities. And as with the Canadian experience, our metropolitan areas' challenge is lagging productivity. Hours worked per capita in these CMAs are higher than in nearly every other large city region outside North America, but these hours are less productive than those in other cities.

Exhibit B Productivity in Canada's cities lags city regions globally



*Average of 78 cities worldwide
 Note: Currency converted at PPP. Labour productivity defined as GDP per worker, not GDP per hour worked.
 Source: Institute for Competitiveness & Prosperity analysis based on data from OECD Territorial Reviews, *Competitive Cities in the Global Economy 2006*; Statistics Canada - Labour Force Survey; Bureau of Labor Statistics - Current Population Survey.

Sluggish productivity growth remains a problem for Canada

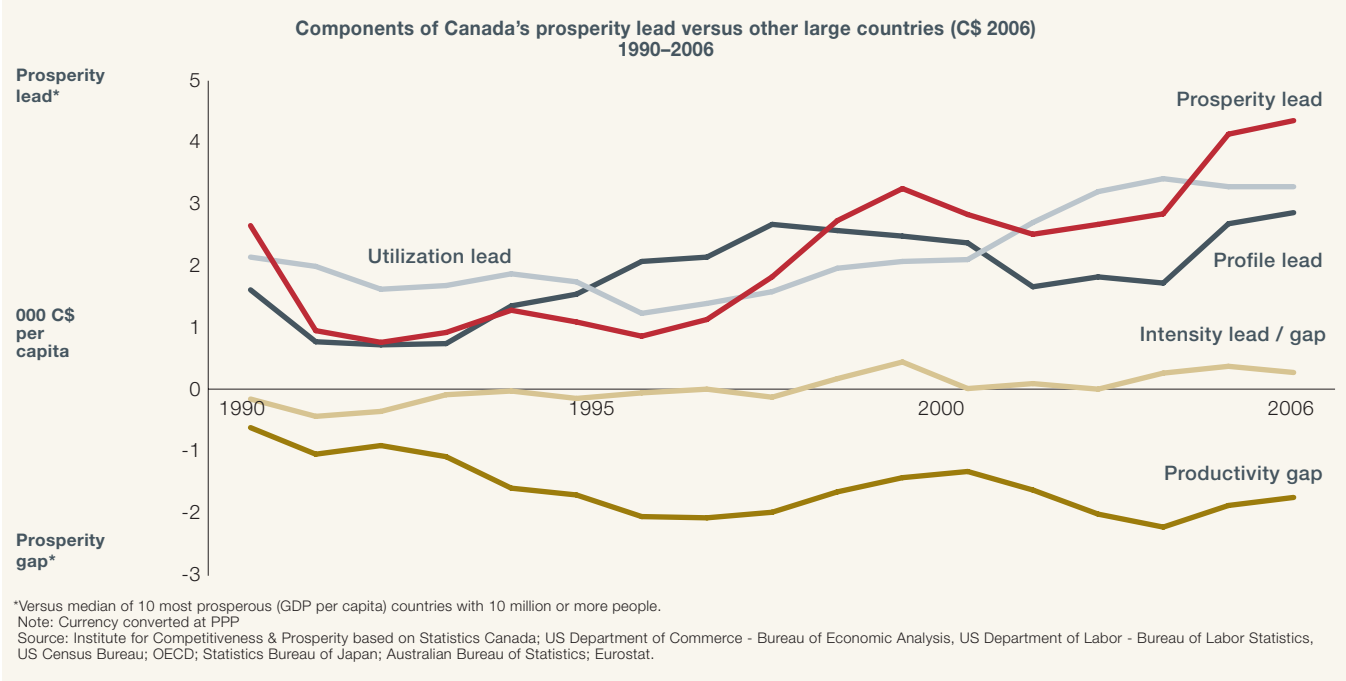
We have seen that Canada has a wide and growing prosperity gap against our North American neighbour, and that sluggish productivity growth is a critical reason we are not realizing our prosperity potential. As we broaden our perspective beyond North America, we can also see that Canada has been a real laggard in productivity growth over the last twenty-five years compared to nine other OECD countries with a population of ten million or more. The economic growth we have been achieving is more a result of working harder – through increasing participation and employment rates – than working smarter.

We compared Canada's sources of prosperity with these international peers

using the same waterfall approach we have developed for US comparisons. Data availability prevents us from providing the same level of detail, but we can compare Canada's work effort – comprising demographic profile, utilization of adults in the work force, and intensity of hours worked per worker – and productivity – the value created in the average hour of work effort. This international comparison indicates that lagging productivity is Canada's challenge – we work more than those outside North America, but we are less successful at creating economic value in the hours we work (*Exhibit 11*).

Canada's economy is one of the most successful in the world. Our challenge is to build on this success to realize our full prosperity potential for the benefit of all Canadians.

Exhibit 11 Growing productivity and intensity gaps have driven the prosperity gap



Why productivity growth is important for our prosperity

THE INSTITUTE FOR COMPETITIVENESS & PROSPERITY, along with others, has been urging Canadians to step up their efforts to improve productivity. Simply put, productivity growth is the surest way to raise our living standards, with sustainable initiatives and without onerous toil and harmful effects on the environment.

Productivity has no limits

One way to improve living standards is to work more hours or use up more and more of our natural and physical resources. But this is limiting. We can find new workers from our population up to a point. But there are only so many hours in a day and days in a year. Natural resources are limited or become too costly to acquire and in addition their use can have adverse environmental consequences.

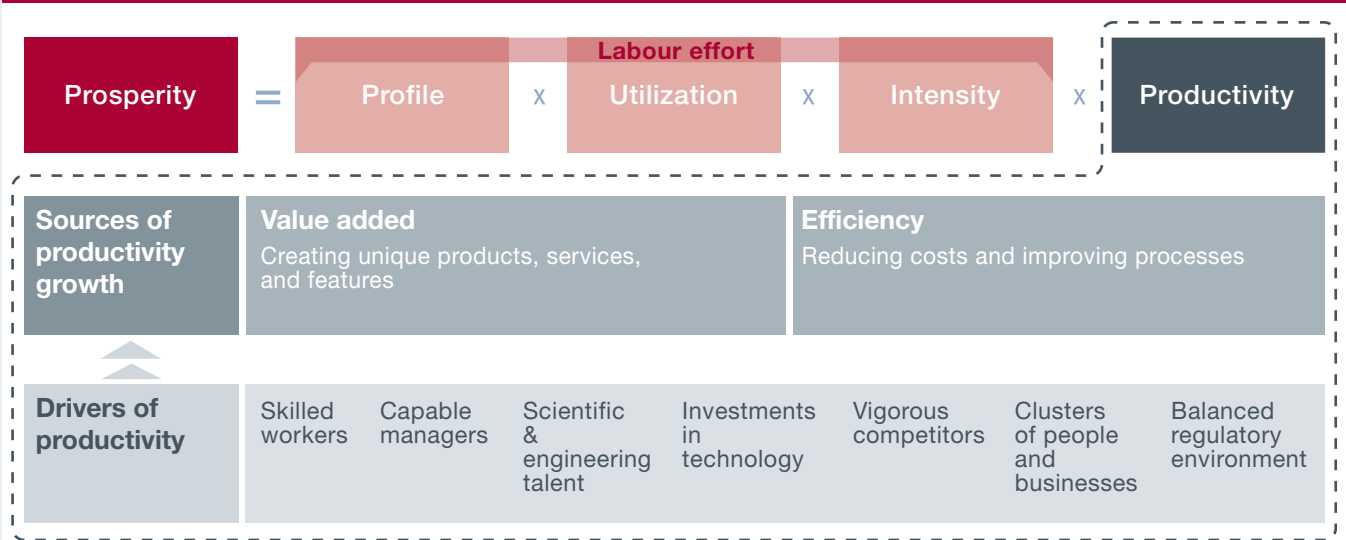
The other way is to improve productivity. And the only limit to productivity growth is human ingenuity.

Productivity measures how much value we create per unit of resources used – whether the resources are an hour of labour, an hour of machine time, a barrel of oil, or any other scarce resource. The value created is represented by how much money somebody will pay for the output – beyond the value of resources used. Productivity increases in one of two ways – greater

value added per unit of input or greater efficiency in the use of inputs (*Exhibit C*):

- Higher value added comes from adding innovative unique product or service features for which consumers will pay more than the added cost to the producer.
- Efficiency gains come about from any number of different process innovations: better organization of work, automation, improved economies of scale, etc.^a

Exhibit C Productivity growth comes from value added products and services and efficiency



Source: Institute for Competitiveness & Prosperity.

^a Technically, greater capital investment does not increase overall productivity – but it does increase labour productivity.

Unfortunately, many people believe that productivity improvements come only from greater efficiency, and this in turn is often associated with layoffs or outsourcing of work. But that is only one part of the productivity story. Equally, if not more important, is the productivity growth from new value creation. Individuals and businesses, which add more value to resources through unique skills, products, and services, are more productive.

Among businesses, which are the source of much a jurisdiction's productivity, strategies that successfully lead to products and services for which people will pay a premium will drive regional productivity higher. An efficient auto assembly plant producing products that require price incentives to stimulate consumer demand is not as productive as a facility producing cars that are in great demand at premium prices. The challenge for Canada – and for all jurisdictions – is to create the environment in which management teams are developing breakthrough value added products and services.

Jurisdictions that attract and foster these individuals and businesses are more productive. For example, Ontario's and British Columbia's wine industries have become more productive as they have moved to higher quality wines and introduced Icewine to the world, since producers can now charge more for products that consumers value more.

Princeton University economist Paul Krugman, summed up the importance of productivity before the dramatic increase in US productivity in the late 1990s: "Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker."^b

Rising productivity has driven our past economic growth

At one time, as the Dallas Federal Reserve observes, today's developed economies were mostly agrarian and farmers manually worked the land and spread the seeds.^c Investment in machinery, such as tractors and threshers, and innovations, such as high yield seeds and new crop rotation methods, dramatically reduced the amount of work and workers needed to produce the same output of agricultural products. Farmers out of work headed toward the urban centres, where many found jobs in newly emerging manufacturing plants producing all sorts of consumer goods.

Eventually, technological and process innovations occurred in all areas of manufacturing, and output increased faster than employment. Productivity gains were clear in the vast increases of output with the same amount of labour. Workers then moved on from their assembly line jobs to retail stores, food services, medicine, engineering, management, and other professional industries.

The greatest spikes in productivity have historically been associated with specific technological innovations. The steam engine, electricity, and assembly lines are among the most important technological innovations that have led to higher productivity growth. More recently computers and the internet have been associated with more productivity.

Productivity growth benefits workers and consumers

Since most of the value created in an economy goes to workers in the form of wages, productivity growth means higher wages. The relationship between

productivity and wages in Canada and the United States is very strong (*Exhibit D*). Productivity also means more innovative and lower cost products and services available for every day use.

Most economists agree on the drivers of productivity growth

While economists may differ on the relative importance of various contributors to productivity growth, most agree on what the factors are:

- Skilled workers who can adapt quickly to changing circumstances – on the job and over time
- Capable managers adept at discerning consumer desires, competitive weaknesses, and innovative ways of organizing operations – and at implementing change
- Scientific and engineering talent that can achieve major breakthroughs and continuous improvements in products and processes
- Investments in technology that makes workers more effective and efficient
- Competitive pressure to spur innovation
- Clusters of people and businesses to stimulate co-operation, competition, and new ideas
- A balanced regulatory environment that meets the need for worker and consumer protection and for flexibility and responsiveness in resource allocation to the best opportunities for wealth creation.

^b Paul Krugman, *The Age of Diminished Expectations*, MIT Press (1994).

^c Federal Reserve Bank of Dallas, 2003 Annual Report, May 2004. Available online at: www.dallasfed.org/fed/annual/2003/ar03c.html

Productivity drives a jurisdiction's competitiveness and standard of living

currency, and attractive returns to capital—and with them a high standard of living. Productivity is the goal.^d

Competitiveness expert, Michael Porter, stresses the importance of productivity:

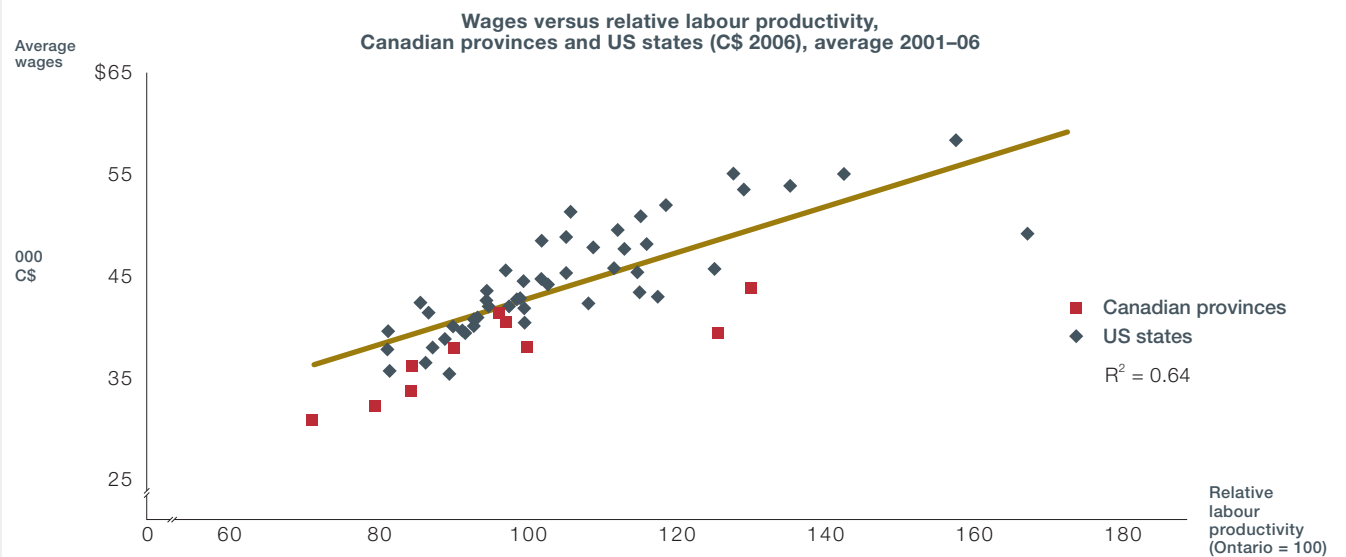
To understand competitiveness, the starting point must be the underlying sources of prosperity. A nation's standard of living is determined by the productivity of its economy, which is measured by the value of goods and services produced per unit of the nation's human, capital, and natural resources. Productivity depends both on the value of a nation's products and services, measured by the prices they can command in open markets, and the efficiency with which they can be produced.

True competitiveness, then, is measured by productivity. Productivity allows a nation to support high wages, a strong

Productivity growth is clearly a fundamental measure of economic health. Canada is currently on a troublesome trend of falling further and further behind in productivity growth. Productivity accounts for the greatest share of our prosperity gap. This lost potential reduces opportunities for us all, as higher productivity is the key to raising living standards for all Canadians.

Raising efficiency is one way to achieve higher productivity. But productivity breakthroughs are also achieved through innovation and upgrading to deliver higher value products and services. Canadians need to drive greater innovation to create unique products and services that are world beating.

Exhibit D Higher productivity is associated with higher earnings



Note: Currency converted at PPP. Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada, Provincial Economic Accounts (CANSIM Table 384-0002), Labour Force Survey (CANSIM Tables 282-0072, 282-0018 & 282-0002); US Bureau of Economic Analysis, Regional Economic Accounts; US Bureau of Labor Statistics, Occupational Employment Statistics, Current Population Survey.

^d Michael Porter, "Building the Microeconomic Foundations of Prosperity: Findings from the Business Competitiveness Index," *The Global Competitiveness Report 2003-2004*, World Economic Forum, p. 31.

AIMS and the 2020 Prosperity Agenda



Pursuing the 2020 Prosperity Agenda requires action on four fronts

OUR AGENDA FOR PROSPERITY builds from the AIMS framework that guides our work. AIMS is built on an integrated set of four factors:

- 1 Attitudes toward competitiveness, growth, and global excellence.** Our view is that an economy's capacity for competitiveness is grounded in the attitudes of its stakeholders. To the extent that the public and business leaders believe in the importance of innovation and growth, they are more likely to take the actions to drive competitiveness and prosperity.
- 2 Investments in education, machinery, research and development, and commercialization.** As businesses, individuals, and governments invest for future prosperity they will enhance productivity and prosperity.
- 3 Motivations for hiring, working, and upgrading as a result of tax policies and government policies and programs.** Taxes that discourage investment or labour will reduce the motivations for investing and upgrading.
- 4 Structures of markets and institutions that encourage and assist upgrading and innovation.** Structures, in concert with motivations, form the environment in which attitudes are converted to actions and investments.

These four factors can create an ongoing reinforcing dynamic. When AIMS drives prosperity gains, each one of the four factors would be reinforced. In an economy of increasing prosperity, attitudes among business and government leaders and the public would be more optimistic and welcoming of global competitiveness, innovation, and risk taking. Given these positive attitudes and with the greater capacity for investment generated by prosperity, Canadians would invest more in machinery, equipment, and software and in education. Motivations from taxation would be more positive, as governments would not see the need for raising tax rates. And greater economic prosperity would improve structures as more opportunities for specialized support were created. Then increased economic activity would drive more competitive intensity. These developments would lead to even higher prosperity, which would further strengthen each AIMS element, and so on in a virtuous circle (*Exhibit 12*).

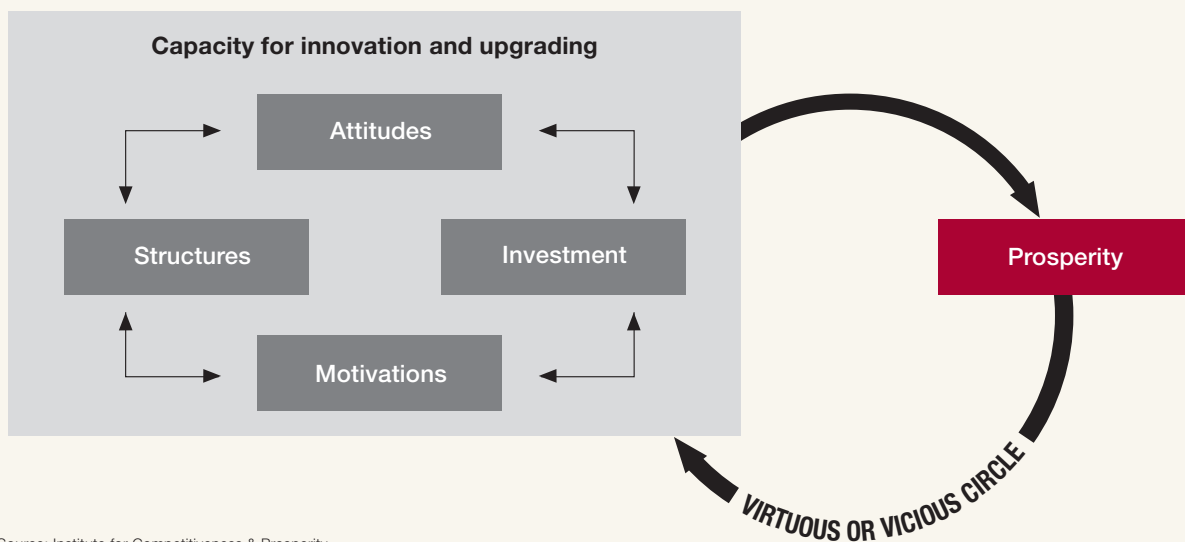
But this AIMS-prosperity dynamic could also reverse into a vicious circle. Unrealized prosperity potential could create pessimism and concerns about competitiveness and innovation rather than openness to them. These negative attitudes would be less conducive to investments, and reduced prosperity would also lead to fewer investment opportunities. Unrealized economic potential means tax revenues would not meet fiscal needs, leading governments to raise tax burdens, thereby de-motivating investments. Reduced economic

activity would create fewer nodes of specialized support and less openness to the public policies that would result in more competitive intensity.

We are concerned that if we do not address our current challenges in our complacent attitudes, under investment, de-motivating tax burdens, and inadequate market structures, we will be on the trail to a vicious circle. We must avoid this trend and ensure we maintain our economy on the virtuous circle track.

Our 2020 Prosperity Agenda last year comprised elements in each of the four AIMS factors. Our Agenda for the coming year does likewise.

Exhibit 12 **AIMS drives prosperity; prosperity drives AIMS**



Source: Institute for Competitiveness & Prosperity.

Attitudes:

Accept the challenge; overcome complacency

Canadians need to realize the urgency of realizing our prosperity potential

Most Canadians are not aware of or worried about the prosperity gap with the United States, but they are concerned about the standard of living our children will enjoy. And they agree about the importance of living up to our potential.

In our previous work, we have determined that Canadians hold similar attitudes toward competitiveness, prosperity, risk taking, and innovation as our counterparts in the United States.²² What we do not perceive is evidence of the importance of the prosperity gap and the benefits of realizing our prosperity potential. Recent research has confirmed this.

As part of the Institute's Conference on Canada's Prosperity last March, The Innovative Research Group, a national public opinion research and strategy firm with offices in Toronto and Vancouver, conducted an online survey among the members of its Canada 20/20 panel

between March 1 and 4, 2007. The study included 3,285 respondents across Canada.²³ Two important observations emerged from the study.

Canadians tend not to worry about the prosperity gap

The study confirmed that most Canadians tend not to be concerned about the widening prosperity gap with the United States. Most respondents in Canada reported being satisfied with their current standard of living. In fact, more than three-quarters of respondents to the survey thought the average American has about the same (42 percent of respondents) or worse (35 percent) standard of living than the average Canadian.

Yet, while a majority of respondents agree that "I am able to afford a better standard of living than my parents" (58 percent agree versus 27 percent disagree), only a quarter agree that "the next generation will be able to afford a better standard of living than we do" (26 percent agree, 44 percent disagree).

Canadians tend not to feel strongly that our performance versus the US economy is of critical importance – 51 percent agree that "our lower

standard of living, compared to the United States, is the price we pay for a better quality of life," while 28 percent disagree. Nearly half, 47 percent, agree that "Canada's economy is doing just fine; it doesn't matter whether we are doing better or worse than the United States," while 37 percent disagree.

Even when informed about the prosperity gap versus the United States, fully 58 percent of respondents saw it as either "just one of the many problems government should address" (41 percent) or "not really a problem" (17 percent). To be sure 39 percent saw the prosperity gap as a significant (27 percent) or critical (12 percent) problem to be addressed.

We are more concerned about failing to achieve our economic potential

However, these results change significantly when the impact of the prosperity gap on living standards and on government revenue is explained to respondents. The percentage seeing the prosperity gap as a more important problem rose from 39 to 57 percent, while the percentage seeing it as a less important problem fell from 58 to 40 percent (*Exhibit 13*).

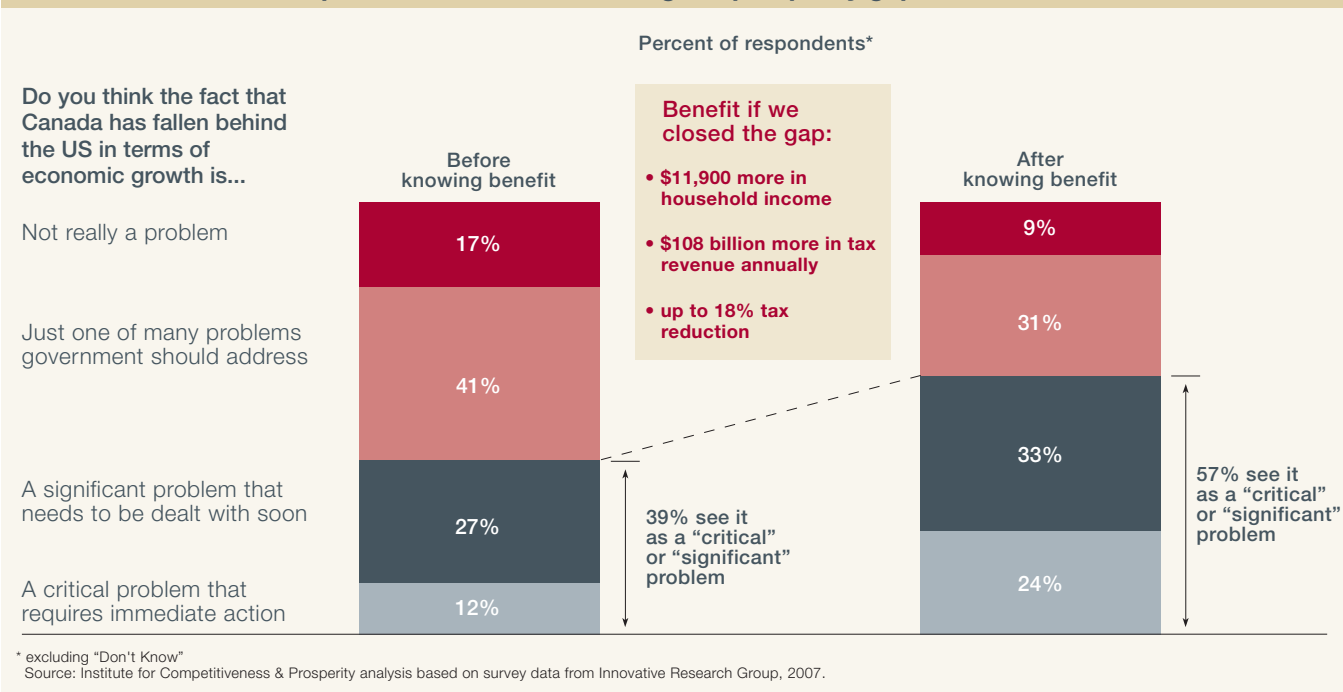
²² Institute for Competitiveness & Prosperity, Working Paper 3, *Striking similarities: Attitudes and Ontario's prosperity gap*, September 2003.

²³ Canadian survey results as presented at the Institute's March 2007 Conference on Canada's Prosperity. Available online at: www.competeprosper.ca/images/uploads/ICP_presentation_20070308_Lyle.pdf

Additionally, three-quarters (74 percent) of respondents in Canada agree that “it is a terrible waste for Canadians to fail to make the most of the tremendous resources and opportunities we enjoy in this country,” while only 10 percent disagree.

We conclude that the major implication of this research is that Canadians need a better understanding of the downside of the prosperity gap. That will help them realize the urgency of the need to move from the collective complacency to a shared determination to realize Canada’s prosperity potential.

Exhibit 13 Canadians respond to the case for closing the prosperity gap



Investment:

Focus on technology and people

Canadians have to step up their investment in capital and in themselves

Canadians are not investing adequately for their future prosperity. This is true for investments in physical and human capital by individuals, businesses, and governments. Our future prosperity and our ability to achieve our full potential depend on the investments we make today in these areas.

We continue to urge business leaders to invest more in productivity enhancing equipment and technology. And we reinforce our call for more investment in people's education and skills.

Increase investment in machinery and equipment, particularly Information and Communications Technology

Canadian businesses continue to trail their US counterparts in investing in machinery, equipment, and software to make their workers more productive. Investments in machinery, equipment and software are typically allocated to information and communications technology (ICT) and to all other categories, such as transportation equipment and traditional factory equipment. ICT

accounts for about a third of investment in machinery, equipment, and software. These results indicate our major gap is in ICT investment.²⁴ As a percentage of GDP, we have out invested US businesses each year from 1997 to 2006 in non-ICT machinery and equipment. Per worker, US businesses out invest Canadian businesses, but the overall difference is smaller than that in ICT.

Last year, the Institute assessed the lower adoption of ICT by Canadian businesses, particularly small and medium enterprises.²⁵ The research we reviewed indicated that investment in ICT enhances productivity at three levels. At the most basic level, research by the OECD and others indicates that equipping staff with computers and software increases firm and national productivity. At the second level, connecting computers in networks and drawing on more than technologies can drive productivity even higher. But the most significant benefit of ICT adoption can be that it enables profound transformations through new business processes or organizational change or both.

We concluded that the lack of investment in ICT could be attributed to factors we have identified in previous annual reports – lack of competitive pressure to spur Canadian businesses to adopt technology, less adequate management capabilities to discern the

benefits of technology and to capitalize on them, and higher taxation on business investment. We expand on these themes later in the report.

The investment gap in machinery, equipment, and software between Canada and US is widening. In 2006, our businesses invested 29 percent less per worker than their US counterparts; in 1981, this gap was only 10 percent (*Exhibit 14*).

Reducing this investment gap would help Canada achieve its prosperity potential. With higher machinery, equipment, and software investment our workforce could be more productive.

Invest more in education

Since our first Report on Canada in 2004, we have been urging stakeholders in Canada's prosperity to increase our investment in education. We are concerned that governments in Canada have been trading off necessary investments in education to fund health care. As we compare our current public spending patterns in Canada with those in the previous decade and with the United States, we find that we are falling behind in education. As recently as 1992, all levels of government in Canada spent \$2,400 per capita on education (in 2006 dollars) – 4.4 percent more than we spent on

²⁴ Task Force on Competitiveness, Productivity and Economic Progress, Fifth Annual Report, *Agenda for our prosperity*, November 2006, p. 34.

²⁵ Roger Martin and James Milway, *Enhancing the Productivity of Small and Medium Enterprises through Greater Adoption of Information and Communication Technology*, Information and Communication Technology Council, Ottawa, March 2007. Available online at: www.ictc-ctic.ca/uploadedFiles/Labour_Market_Intelligence/Enhancing-the-Productivity-of-SMEs.pdf

health care (*Exhibit 15*). But, as governments tackled deficits, they cut real per capita spending on education at a much faster rate than that on health care spending. By 1998, governments were spending more on health care than on education. This gap widened considerably as health care spending per capita increased at an annual trend-line real growth of 3.5 percent between 1998 and 2007, while education spending increased only 1.5 percent annually. Last year, per capita public spending on health care outpaced spending on education by 21.8 percent – a significant reversal over the decade. In the meantime, spending by governments in the United States grew at about the same rates for health care and education.

It is encouraging to note that Canada's public spending on education turned up

in 2006 after several years of little or no growth. We urge governments across Canada to pursue ever increasing investments in education as this is a key opportunity for realizing our prosperity potential.

Encourage youths to pursue more education

In a knowledge economy, it is almost certain that those without a base level of skills will be left behind. We are seeing that now. The public policy imperative is to find ways to encourage (even coerce – as in Ontario now) youth to complete their high school diploma. We need creative ways to help students complete their high school studies. We need to make a concerted effort to strengthen apprenticeship programs. We see the need to keep our young people in school to achieve higher levels of skills

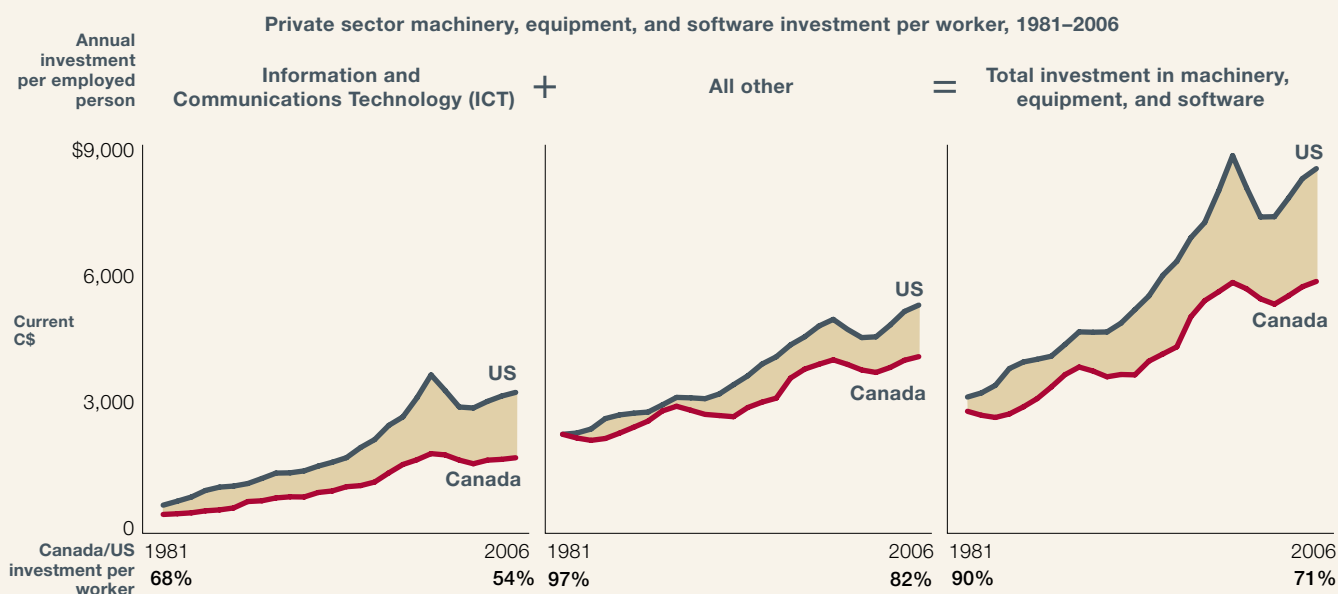
and accreditation and to bring more Canadians into higher earnings streams.

Continue to address the challenge of high school dropouts

In our research conducted over the last year, the Institute identified the impact of failure to complete high school and poverty. This is in addition to previous evidence of the consequences of low educational attainment.

- High school dropouts are much more likely to have incomes below the Low Income Cut Off (LICO). While failure to have a high school diploma is not as economically harmful as being in other risk groups (such as lone parents or recent immigrants), in combination with other risk factors it is very detrimental. For example, being a high school dropout is associated with a 15.2 percent likelihood of having earnings

Exhibit 14 Canadian businesses under invest to support their workers' productivity



Note: Currency converted at PPP.
 Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada (special tabulations), Labour Force Survey; US Department of Commerce - Bureau of Economic Analysis, US Bureau of Labour Statistics - Current Population Survey.

below LICO. Being a lone parent and a high school dropout raises the likelihood to 33.1 percent.²⁶

- High school dropouts are also more likely to be at the bottom of income distribution – 60 percent of families whose principal earner is a high school dropout are in the bottom 40 percent of after tax, after transfer earnings. Less than 10 percent are in the top 20 percent of earners.²⁷
- High school dropouts are more likely to be working part time involuntarily than those with higher educational attainment.²⁸

- High school dropouts are much less likely to find work, and when they do their hourly earnings are much lower than those with a high school diploma.²⁹

- High school dropouts' skills in literacy, numeracy, and problem solving trail the rest of the population considerably.³⁰

Some provinces have taken the lead in encouraging higher high school completion rates. In 2000, New Brunswick raised the mandatory schooling age from 16 to 18. In 2006, the Ontario government passed a new law that requires Ontario youth to stay in school until age 18 or graduation, up from the previous age of 16. Many other provinces are aware of the challenges of

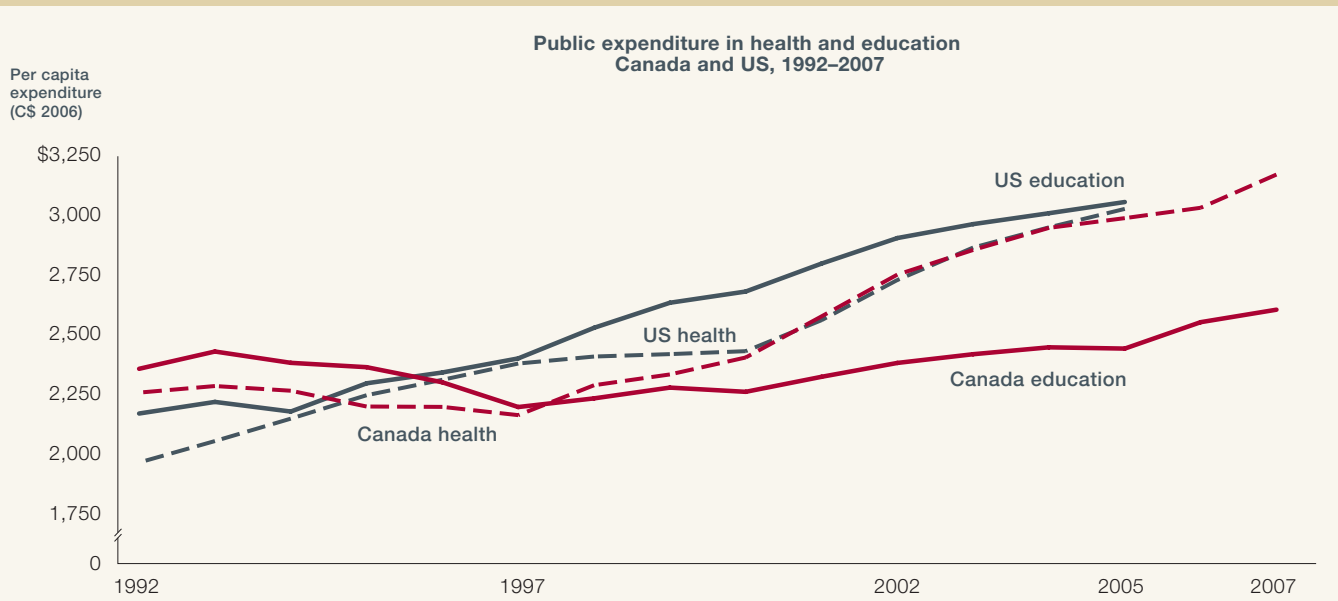
keeping their youth in school and have started initiatives to improve high school completion rates.

Continue to focus on apprenticeships

One area of hope for potential high school dropouts – and many others – is in skilled trades. For somebody who has not completed high school, securing a trade certificate adds about 20 percent to his or her annual income. In fact, these individuals out earn high school graduates without a trade certificate.³¹

Registration for apprenticeship programs, in the more than 300 designated trades across Canada, has been growing significantly since 2000 – from around 200,000 to 294,000 in 2005. Completions have been stable,

Exhibit 15 **Canada's public investment in education trails US expenditure**



Notes: Currency converted at PPP. US health spending includes workers' compensation, medical benefit outlays and excludes administrative and other costs; Canada health spending includes all workers' compensation. Values deflated using appropriate deflators. Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada, Consolidated Government Revenue and Expenditures; US Census Bureau - State and Local Government Finances, Office of Management and Budget, Historical Tables, National Academy of Social Insurance, Workers' Compensation: Benefits, Coverage, and Costs, multiple years.

²⁶ Working Paper 10, *Prosperity, inequality, and poverty*, p. 29.
²⁷ *Ibid.*, p. 30.
²⁸ Working Paper 9, *Time on the job*, pp.25-26.
²⁹ *Ibid.*, pp.25-26.
³⁰ Working Paper 10, *Prosperity, inequality, and poverty*, p. 31.
³¹ *Ibid.*, p. 31.

however, at around 20,000 annually.³² Across all trades, only 48.5 percent of people registered in an apprenticeship program in the 1991-2001 period completed the program within four years.³³ A recent report from the Canadian Apprenticeship Forum identifies the key barriers to completion of apprenticeship programs as: the unemployment periods experienced by apprentices, the older age of apprentices, the lack of preparation in work ethic and basic skills in high school, the negative image of the trades in general, and the lack of compulsory apprenticeship completion to practice many trades.³⁴ Creative solutions are required to address these completion issues and make apprenticeships a solution to the skill shortages.

One challenge is to ensure that the benefits and costs of apprenticeships are borne by the same people. Currently, apprenticeships suffer from a free rider problem. Employers who invest in apprenticeships are developing skilled workers who can be hired by other employers who get the benefit without the investment in their training. To help increase apprenticeships, in its March 2007 budget, the federal government announced \$100 million of new funding for the Apprenticeship Incentive Grant to support apprentices who have completed the first and second years of their apprenticeship in a Red Seal Program. The Red Seal Program promotes standardization and

mobility across Canadian provinces so trades people can work in all provinces. In addition, the federal government announced an additional \$200 million for the Apprenticeship Job Creation Tax Credit to encourage employers to hire new apprentices.³⁵ In Ontario, the 2004 budget introduced a refundable tax credit for businesses hiring apprentices to reduce costs to employers.

Raise awareness of the benefits of post secondary education

Our research into inequality and poverty indicates yet again the importance of education, not only for Canada's competitiveness and prosperity overall, but also as a way to assist the disadvantaged move into the economic mainstream. As we have pointed out in the past, more education leads to greater attachment to the labour force and higher earnings.³⁶

Yet the evidence indicates that students from lower income families are less likely to receive post secondary education, particularly at a university. Economists Laval Lavallée, Bert Pereboom, and Christiane Grignon found, for example, that youth from the highest income quartile in Canada are more than twice as likely to attend university than those in the lowest quartile.³⁷ Statistics Canada researcher Marc Frenette found a similar pattern, but not as pronounced – 31 percent of 19 year olds in the bottom quartile were attending university in 2003 versus 50 percent in the top quartile.³⁸

While family income is an important predictor of pursuit of post secondary education, researchers have found other factors that are more important, though still related to income. Atiq Rahman, Jerry Situ, and Vicki Jimmo from Statistics Canada found that if one or both parents had post secondary education or if the youth came from a home with two parents, the probability of pursuing post secondary education increased.³⁹

More recently, Frenette linked university attendance with performance on standardized tests, high school grades, parental influences, and high school quality; in fact, he concluded that these factors accounted for 84 percent of the university attendance gap between youth from the top and bottom quartiles. Only 12 percent of the gap could be linked to financial constraints.⁴⁰

Still, income does matter and drives some of these other characteristics. For example, families with higher income are able to enrich their children's education and create an environment more positively disposed to post secondary education. Frenette found that these factors are more prevalent as income increases. Frenette's study, along with research conducted in the United States,⁴¹ indicates that credit constraints are not the key challenge facing lower income families when they consider post secondary education.

³² Statistics Canada, "Registered Apprenticeship Training Programs," *The Daily*, November 15, 2007.

³³ Andrew Sharpe, Jean-François Arsenault and Simon Lapointe, "Apprenticeship Issues and Challenges Facing Canadian Manufacturing Industries" CSLS Research Report No. 2008-2. February 28, 2008, p. 60.

³⁴ *Ibid.*, pp. 60-64.

³⁵ Department of Finance Canada, "Budget 2007" March 2007, p. 132.

³⁶ Report on Canada 2007, *Agenda for Canada's prosperity*, p. 33. See also: Thomas Lemieux, Craig Riddell, and Brahim Boudarbat 2003, "Recent Trends in Wage Inequality and the Wage Structure in Canada," in D. Green and J. Kesselman (eds.), *Dimensions of Inequality in Canada*. Vancouver: UBC press, 2006, pp. 1-46 – for evidence on the growth in returns to post secondary education in Canada between 1980 and 2000.

³⁷ Laval Lavallée, Bert Pereboom, and Christiane Grignon, 2001, "Access to Postsecondary Education and Labour Market Transition of Postsecondary Students," Canada Student Loan Program, HRDC, mimeo.

³⁸ Marc Frenette, "Why Are Youth from Lower-income Families Less Likely to Attend University? Evidence from Academic Abilities, Parental Influences and Financial Constraints," Statistics Canada Working Paper 11F0019MIE – No. 295, February 2007, p. 7.

³⁹ Atiq Rahman, Jerry Situ, and Vicki Jimmo, "Participation in Postsecondary Education: Evidence from the Survey of Labour and Income Dynamics," Statistics Canada Working paper 81-595-MIE2005036, October 2005.

⁴⁰ Marc Frenette, "Why Are Youth from Lower-income Families Less Likely to Attend University? Evidence from Academic Abilities, Parental Influences, and Financial Constraints."

⁴¹ See Pedro Carneiro and James Heckman, "The Evidence on Credit Constraints in Post-secondary Schooling," *The Economic Journal*, Vol.112, Issue 482, June 2002.

Lack of information on the costs and benefits of post secondary education are likely more important barriers. According to polling data gathered by the Canada Millennium Scholarship Foundation, Canadians whose family income is below \$30,000 estimate the cost of annual undergraduate university tuition at nearly \$7,000; more affluent Canadians estimate the cost to be \$2,000 less than that. In 2003–04, when the survey was conducted, the actual average tuition was \$4,025. On the benefit side, lower income Canadians estimate that the average university graduate earns \$39,000; other respondents estimated the income to be around \$42,000. The actual result, according to the most recent census, was \$62,000. This lack of information, along with other characteristics, may explain why students receiving aid to

attend post secondary institutions are less likely to complete their degree than those who receive no aid.⁴²

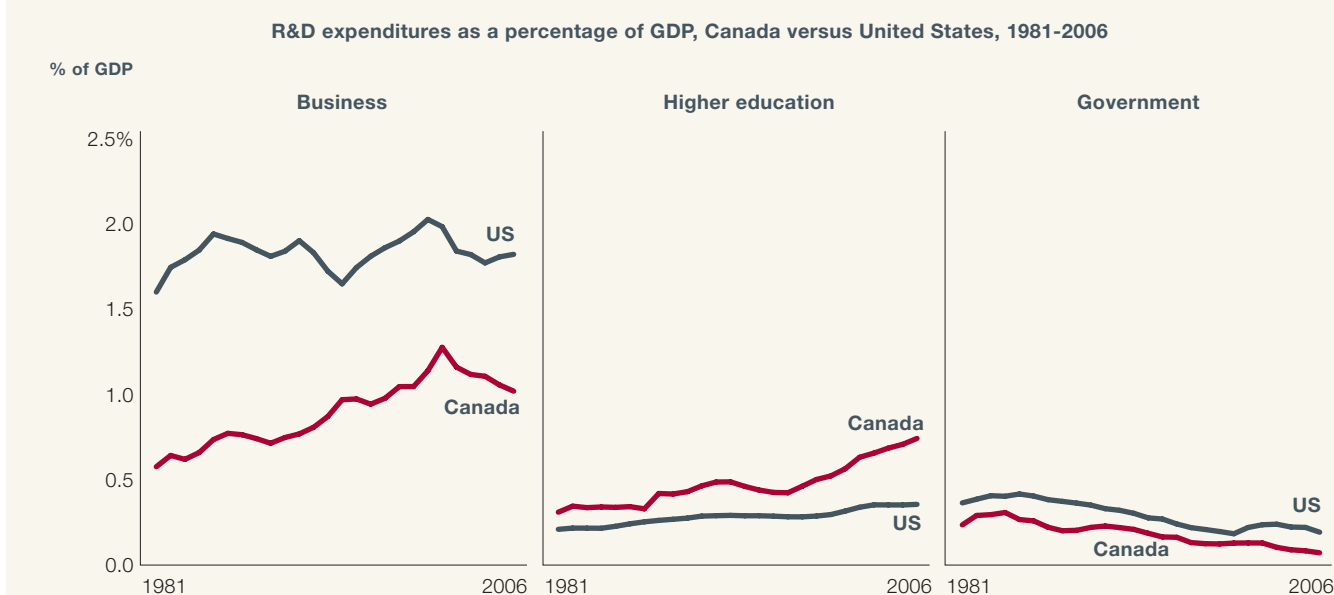
Rethink the research/student experience tradeoff

One area where Canada leads US universities – and most other jurisdictions in the world – is in research and development spending. As we have discussed in previous work, research and development conducted by institutes of higher education (HERD) as a percentage of GDP is much higher in Canada than in the United States. In 2006, Canada had a ratio of 0.76 percent compared to 0.37 percent in the United States (*Exhibit 16*). Canada outperforms most OECD economies in HERD as a percentage of GDP.

Canada has built an impressive array of funding mechanisms for research conducted by higher education facilities,⁴³ and federal and provincial governments are committed to expanding this. Our investment in HERD stands in contrast to our businesses' commitment to R&D. In 2006, investment by US business institutions in R&D as a percentage of GDP was 1.83 percent as compared to 1.03 percent in Canada.

We think it is important to assess the tradeoffs being made at our universities between research and teaching. No doubt research and teaching excellence are mutually reinforcing. But Canadian universities' relative performance in the student experience does not compare favourably with the relative standing of our research commitment.

Exhibit 16 **Canada out invests the United States in university R&D**



Note: Data for 2005 and 2006 are preliminary.

Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada; US National Science Foundation, Division of Science Resources Statistics, 2007 - *National Patterns of R&D Resources: 2006 Data Update*, NSF 07-331.

⁴² Canada Millennium Scholarship Foundation, "Low-income Canadians' perceptions of costs and benefits – a serious barrier to higher education," Mimeo, 2004. Available online at: www.millenniumscholarships.ca/en/

⁴³ Roger Martin and James Milway, *Strengthening management for prosperity*, Institute for Competitiveness & Prosperity, Toronto, May 2007, pp. 12-13.

In 2006, Canada's universities participated in the National Survey of Student Engagement (NSSE), a US-based survey that measures students' experiences in their universities. NSSE attempts to benchmark specific schools against peer institutions in five areas: the level of academic challenge, opportunities for active and collaborative learning experiences with fellow students, student-faculty interaction inside and outside the classroom, availability of enriching educational experiences outside the traditional classroom setting, and a campus environment supportive of positive working and social relationships.

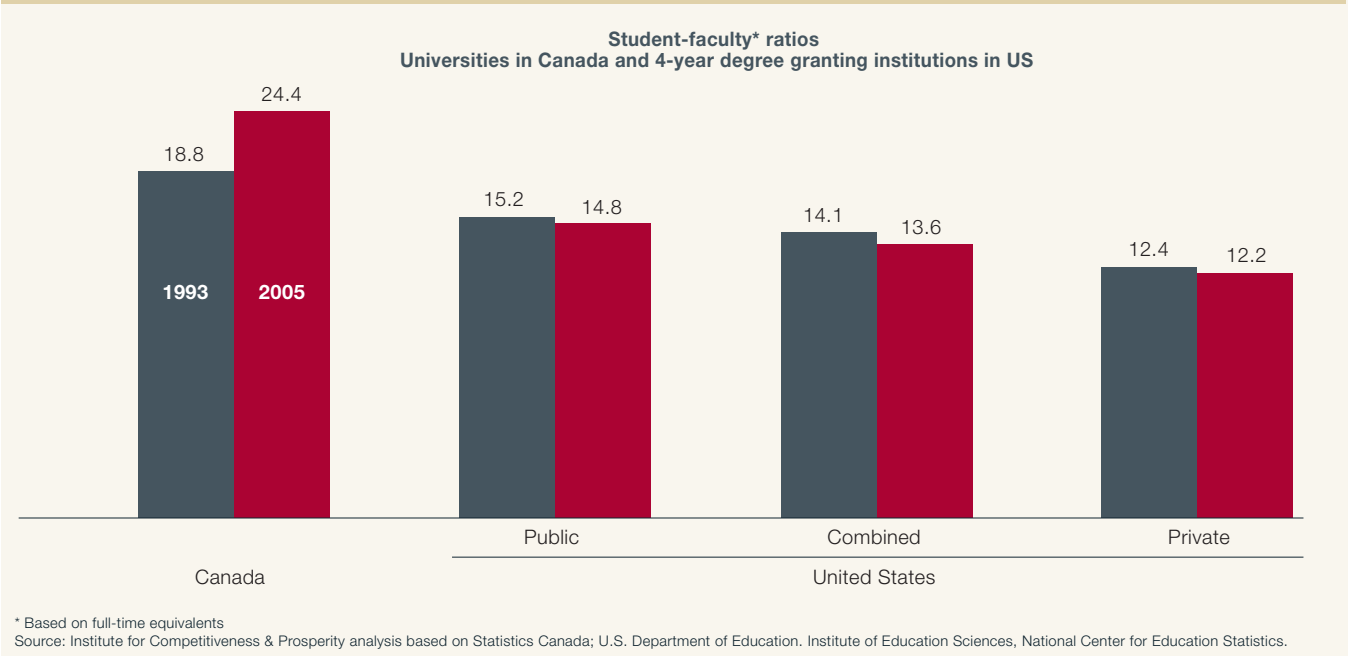
The results indicate that Canadian universities compare favourably with their US peers in providing a solid academic challenge to their students. On average, students at our universities rate the level of academic challenge

(for example, the number of assigned textbooks, written papers twenty pages or more, course work emphasizing application of theories or concepts to practical problems or in new situations) at the median of how their US counterparts rate their universities. In the area of supportive campus environment, Canadian students rate Canadian universities just below the median. But in other areas – enriching educational experiences, active and collaborative learning, and student-faculty interactions – our students are less positive about their experiences. Typically, our universities are in the bottom third of ratings in these factors.⁴⁴

One of the factors that likely drive these ratings is the difference in student-faculty ratios. The Institute calculated these ratios for each Canadian university and the most similar four-year

degree granting institutions in the United States. In 1993, on average, student faculty ratios were 24 percent worse in Canada than in their US public peers and 52 percent worse than in private peers (*Exhibit 17*). Taking an average of the US student-faculty ratios (based on public and private universities' share of enrolment), the ratio was 33 percent higher in Canada. Between 1993 and 2005, as US institutions slightly decreased student-faculty ratios on average, Canadian universities have seen theirs rise by nearly 30 percent. Taking an average of the US student-faculty ratios (based on public and private universities' share of enrolment), the Canadian ratio is now 79% worse than in the US.

Exhibit 17 Student-faculty ratios are much higher in Canadian universities than at comparable schools in the United States



⁴⁴ This varies across the 31 Canadian universities that participated in NSSE. Special tabulation prepared by the National Survey of Student Engagement for the Institute for Competitiveness & Prosperity.

These findings are indicative, not conclusive. But we need to assess whether we have the right balance between research and teaching in our universities. Important questions need to be answered. Can we extend our research investment advantage to enrich student experiences? Are we emphasizing adequately the importance of university graduates as drivers of our competitiveness and prosperity?

We think university administrators, leaders in public policy, and the research community should investigate these issues further to ensure that we are striking the right balance in research and teaching in Canada's universities. It is possible that in gradually increasing the student-teacher ratio over time, we have failed to recognize the impact on student experience. Parents of today's university students, who themselves attended university in Canada a generation ago, probably would not recognize the crowded lecture halls their children attend.

In his presidential address to the Canadian Political Science Association in 2006, Professor Kim Richard Nossal of Queen's University observed that Canadian universities had perhaps embraced research too much. He pointed out,

...universities in Canada have welcomed the influx of cash for research. In the process they have eagerly embraced the 'academic capitalism' ... to strengthen the bureaucracies devoted to... research funding; to encourage faculty to become more research-intensive, and to reward those who bring in research dollars.

...we have reduced our teaching of undergraduates over the years, mostly justifying this reduction in terms of needing more time to devote to research.⁴⁵

As an indication of the strength of Canada's research universities, twenty-two were ranked in the world's top 500 research universities by Shanghai Jiao Tong University in 2007.⁴⁶ In per capita performance among research-intensive universities, Canada stood ahead of Germany, France, and the United States. While these rankings are by no means definitive, they do indicate the relative strength of Canada's universities in the field of natural and social science research. We should celebrate Canada's prowess in higher education research; we need to ensure we are as focused on the quality of our students' experiences.

Investment in assets like machinery and technology and in our own skills and knowledge is a critical driver of increased productivity, and productivity growth is necessary if we are to realize our full prosperity potential. Canadians need to step up their investments.

⁴⁵ Kim Richard Nossal, "A question of balance: The cult of research intensity and the professing of political science in Canada," June 2006. Available online at: http://post.queensu.ca/~nossalk/papers/CPSA_Presidential_Address_2006.pdf

⁴⁶ Rankings are available online at: <http://ed.sjtu.edu.cn/rank/2007/ARWU2007TOP500list.htm>

Motivations:

Pursue smarter taxation

Eliminate unwise taxation that hinders prosperity growth

Governments across Canada need to pursue tax reform as a high priority to raise Canada's competitiveness and prosperity.

Canada is making progress in reducing the tax burdens that affect our businesses' motivation to invest. The federal government has lowered corporate income tax rates and intends to reduce them further. Provincial governments are also cutting their corporate income tax rates. Harmful taxes on capital are slowly disappearing from the Canadian scene. A major challenge remains with provincial sales taxes, where they are not harmonized with the federal GST. Placing more of our tax emphasis on a value added tax like the GST will improve the environment for new business investment. Unfortunately, the federal decision to reduce the GST is a step in the wrong direction. For individuals, the federal and provincial governments need to keep working at lowering the tax burden for low income Canadians. We propose the following steps toward a smarter tax system.

Lower taxes on new business investment

Business investments in machinery equipment, including advanced information and communication technology have been shown to be important contributors to productivity and prosperity.⁴⁷ As we have seen, Canada under invests in this productivity enhancing capital and this contributes to our prosperity gap. Addressing Canada's high taxation of new business investment is an important step to improving this weakness.

Taxes on new investment hurt prosperity

Tax revenues are necessary for making public investments, delivering government services, and achieving a more equitable distribution of income. All advanced economies tax business investment through some combination of corporate income taxes, sales taxes on capital goods, and taxes on capital assets. But these taxes, like all taxes, can motivate behaviours that work against competitiveness and prosperity. The challenge is to ensure that the negative economic impact of specific taxes does not outweigh their benefits.

Specifically, Canada incurs multiple economic costs associated with taxes on new business investment:

- Finance Canada's research has shown that relative to taxes on consumption, taxes on business investment work against the average Canadian's prosperity and economic well being. Reducing corporate capital taxes and income taxes would also be beneficial to the average person's well being – more so than reductions in the GST. This paradoxical result comes about because shifting taxation from business expenditure to consumption expenditure will increase the motivation for business investment, which in turn drives up wages and job creation.
- A study by UK economists Wiji Arulampalan, Michael Devereux, and Giorgia Maffini⁴⁸ concluded that most corporate taxes are borne by workers. Firms are able to pass on a significant portion of the additional costs of corporate taxation to their employees in the form of lower wages. In the long run, the researchers found that more than 100 percent of corporate taxes are borne by workers through the negative impact of lower investment in productivity- and wage-enhancing investments in machinery, equipment, and software.

⁴⁷ See Martin and Milway, *Enhancing the Productivity of Small and Medium Enterprises through Greater Adoption of Information and Communication Technology*, and Andrew Sharpe, "The Relationship between ICT Investment and Productivity in the Canadian Economy: A Review of the Evidence," Centre for the Study of Living Standards, December 2006, pp 46-68.

⁴⁸ Wiji Arulampalam, Michael P. Devereux, and Giorgia Maffini, "The Incidence of Corporate Income Tax on Wages," Oxford University Centre for Business Taxation, Oxford, WP 07/07, April 2007.

- More recently and closer to home, research by Department of Finance economists Aled ab lowerth and Jeff Danforth⁴⁹ suggests that a 10 percent reduction in the cost of capital (which is the effect of a reduction in marginal tax rates on business investment) can increase investment in machinery and equipment by 10 percent in Canada.
- Taxation of business investment affects foreign direct investment even more significantly. In a study for the European Commission, Dutch economists Ruud de Mooij and Sjeff Ederveen reviewed the results of over 31 different economic research studies conducted over the past quarter century.⁵⁰ These studies generated 427 estimates (after eliminating extreme results) of the impact on the level of foreign direct investment in a country and its corporate tax rate. The authors concluded that results typically show that a 1 percentage point reduction in the corporate tax rate raises foreign investment by 2.1 percent. Further investigation of the results indicates that the main effect is on the amount of investment rather than the decision to locate in a specific country.
- Research conducted in Ontario by the Institute found that eliminating sales tax on capital goods, eliminating the corporate capital tax, and increasing the capital cost allowances on new investments in machinery and equipment had positive effects on GDP, net of lost tax revenue.⁵¹

Canada is a high tax jurisdiction in new business investment

The latest research by Jack Mintz indicates that Canada is still one of the higher tax jurisdictions among developed economies. Mintz calculates tax rates on new business investment by determining the tax paid by businesses on a new dollar of investment. He includes corporate income taxes on the profits generated by the new investment, applicable sales taxes on the capital goods as they are purchased, and taxes on the capital assets once in place, where such capital taxes exist.

On the positive side, Canada's taxation of new business investment fell considerably as a result of the March 2007 federal budget, which allows manufacturers and processors to write off their capital investments in machinery and equipment acquired in 2007 and 2008 using a special two year 50 percent straight-line rate. It also increased the capital cost allowance rate on buildings used in manufacturing and processing and on computers. Combining a relatively high corporate income tax, a capital tax, and a sales tax on capital goods, Canada has the sixth highest tax rate on new business investment among OCED countries (*Exhibit 18*).

Marginal tax rates on business investment are slightly lower in Canada than in the United States. But the United States has lower taxation rates overall. Other than its high rates of taxation on business investment, it has an environment that is perhaps the most conducive to investment in the world. Our unwise tax

system would be even more of a liability to our economic performance if the United States ever did address its own unwise tax system by bringing down tax rates on new business investment.

In its October 2007 economic update, the federal government has announced dramatic improvements in the tax environment with its plan to reduce the federal corporate income tax rate to 15 percent by 2012. This is a positive development – but, the federal government should consider speeding up these reductions.

Provincial retail sales taxes increase investment tax burden

While the common perception may be that the provincial sales taxes (in the provinces where they still exist) are levied mostly on retail purchases by the public, more than 40 percent of their revenues are estimated to come from purchases by businesses, including capital investments.⁵² The tax paid on these business costs are ultimately borne by consumers as part of the final price they pay.⁵³

A value added tax, like the federal GST, is paid by the end consumer of a good or service. Businesses pay the GST as they make purchases or investments, but these are reimbursed as they sell their output. In effect, a value added tax is similar to the retail sales tax in that the end consumer ultimately pays – but much of the retail sales tax (paid by upstream producers) is buried in the price. The major difference is that retail sales taxes add to the marginal

⁴⁹ Aled ab lowerth and Jeff Danforth, "Is Investment Not Sensitive to its User Cost? The Macro Evidence Revisited." Department of Finance, Working Paper 2004-05. Ottawa.

⁵⁰ Ruud A. de Mooij and Sjeff Ederveen, "What a difference does it make? Understanding the empirical literature on taxation and international capital flows", European Commission Economic Papers, No 261, December 2006.

⁵¹ Working Paper 5, *Taxing smarter for prosperity*, pp. 43–49.

⁵² Michael Smart, "Lessons in Harmony," *C.D. Howe Institute Commentary*, No. 253, July 2007, p. 6.

⁵³ *Ibid.*, p. 2

tax for new business investment. Tax experts Jack Mintz and Duanjie Chen attribute one quarter of Canada's marginal effective tax rate on new business investment to provincial retail sales taxes (in Ontario, British Columbia, Manitoba, Saskatchewan, and Prince Edward Island).⁵⁴

Because value added taxes are more conducive to business investment – which in turn improves productivity, creates jobs, and increases wages – most economists conclude that they are a much smarter tax than retail sales taxes. The federal government's decision to cut Canada's GST from 7 percent to 5 percent was a mistake. Provinces can ease the harm of this policy by converting their provincial retail sales taxes to a value added tax and harmonizing its collection with the

federal GST – as is currently done fully by three Atlantic provinces and partially by Québec. Our own research shows that this change would have the most beneficial impact on Ontario's investment, employment, and prosperity of the various measures we assessed in our Working Paper, *Taxing smarter for prosperity*.⁵⁵

Taxes are much higher on new business investment on services than on manufacturing

An unfortunate part of the 2007 federal budget was the dramatically different treatment afforded to manufacturers versus firms in the service sector. By introducing the accelerated depreciation for manufacturers, Canada widened its already high gap between taxation on investment by manufacturers versus services, such as financial services,

transportation, construction, and communications. In 2007, Canada's marginal effective tax rate on new investments in manufacturing fell to 23.1 percent from 33.1 percent in 2006 making our rate the 12th highest among OECD countries. At the same time, marginal effective tax rates on services in Canada fell to 36.4 percent from 39.6 percent in 2006 – second highest among OECD countries. The 2008 federal budget continued this accelerated depreciation for manufacturers.

Exhibit 18 Taxation of new business investment is higher in Canada than nearly all OECD countries – despite reductions by the Federal Government in the 2007 budget



* Tax receipts as a percent of GDP is for 2004.
 Source: Institute for Competitiveness & Prosperity analysis based on data from OECD, OECD in Figures, 2007 edition; Statistics Canada, Provincial Economic Accounts; Jack M. Mintz, "The 2007 Tax Competitiveness Report: A Call for Comprehensive Tax Reform," C.D. Howe Institute Commentary, No. 254, September 2007.

⁵⁴ Duanjie Chen and Jack Mintz, "Assessing Ontario's Fiscal Competitiveness." Available online at: www.competeprosper.ca/images/uploads/ChenMintzReport_251103.pdf
⁵⁵ Institute for Competitiveness & Prosperity, Working Paper 7, *Taxing smarter for prosperity*, March 2005.

No other country punishes its service sector relative to manufacturing like Canada does. The 13.3 percentage point gap in 2007 compares with an OECD average of under 2 percentage points. Tied for a distant second place are the United States and the United Kingdom at 5.4 percentage points.

Manufacturing is obviously important to Canada's economic strength. But it is not so important that we should be taxing investment in our service industries at a rate that is 50 percent higher than that in manufacturing. Services include some of the most dynamic sectors of our economy, and many pay high wages. Global competition of tradeable services is increasing. Services, such as business services, financial services, transportation, and hospitality and entertainment, are among Canada's largest clusters of traded industries.⁵⁶ Governments ought to be much more even handed in their taxation of all business investment – relying on entrepreneurs and competitive businesses, not preferential tax rates, to drive investment decisions.

Reduce personal taxes that punish low income earners

We continue to urge the federal and provincial governments to reduce the perversely high marginal tax rates for low income individuals and families. Because our current tax and transfer systems clawback benefits and increase marginal tax rates as income rises, the effective tax rate paid by Canadians at relatively low income levels is very high. The most significant clawbacks are the low income credit to offset GST payments and the Child Tax Benefit. This was created in 1992 to replace

the Family Allowance, the personal non-refundable amount for dependent children, and the refundable child tax credit.

As a result of clawbacks, a family with children faces a marginal effective tax rate of 60 percent as taxable income passes \$31,000. This is the result of losing access to transfers or tax benefits as income passes a certain threshold. Because of clawbacks, those families are keeping only 40 cents of each new dollar they earn.⁵⁷

We and others have made recommendations to address these perversities in the tax and benefit system. These include federal and provincial collaboration to better integrate benefit and tax design, so that high marginal tax rates can be lowered for low income

Canadians. Another option is to reduce the basic personal allowance and lower marginal tax rates so that income increases attract less income tax at the margin. Pooling the amounts to be clawed back across several programs could be used to replace individual clawbacks that accumulate to increase the marginal tax rate for low income earners.

Both levels of government should address the issue of high marginal tax rates for low income Canadians as a high priority.

We encourage the federal and provincial governments to be open to dramatic changes in how we tax and to begin discussions with Canadians on why these changes would benefit all of us.

Exhibit 19 Smart tax reform is a high priority for Canada's prosperity

- **Reduce statutory rates on corporate profits**
- **Convert provincial sales taxes to value added tax (GST)**
- **Eliminate the capital tax**
- **Eliminate disparities in taxation of manufacturing and service sectors**
- **Align Capital Cost Allowance rates with economic life of assets**
- **Eliminate tax credits for Labour Sponsored Investment Funds**
- **Reduce Marginal Effective Tax Rates for low-income Canadians**

Source: Institute for Competitiveness & Prosperity analysis.

⁵⁶ Cluster employment data available online at: www.competeprosper.ca/index.php/clusters/data

⁵⁷ Working Paper 7, *Taxing smarter for prosperity*, pp. 36-37 and Finn Poschmann, "Background Issues Marginal and average effective tax rates in Ontario," July 2004. Available online at: www.competeprosper.ca/images/uploads/FinnPoschmann_290305.pdf

See also Finn Poschmann, "Still High: Marginal Effective Tax Rates on Low-Income Families," *C.D. Howe Institute Backgrounder*, No. 113, February 2008.

Structures:

Place a premium on creativity and innovation

Our market structures need to drive greater innovation

Productivity and prosperity are closely related to innovation by our businesses. The degree to which our firms pursue strategies that put a premium on innovation to create high value products and services is the result of structures of specialized support and competitive pressure (*Exhibit 20*).

Specialized support comes from sources such as close collaboration between researchers and businesses, highly skilled managers, and high quality venture capital. Competitive pressure is driven by capable and motivated rivals as well as sophisticated customers. At the base of this specialized support and competitive pressure are general support from basic infrastructure and a sound primary and secondary education system.

In the past, we have urged stakeholders in Canada's prosperity to address various gaps in specialized support and to find ways to strengthen competitive pressure. In the coming year, we see two priorities. We need to enhance the capabilities of our management through specialized support and attract more sophisticated venture capital. We also need to continue to identify ways to

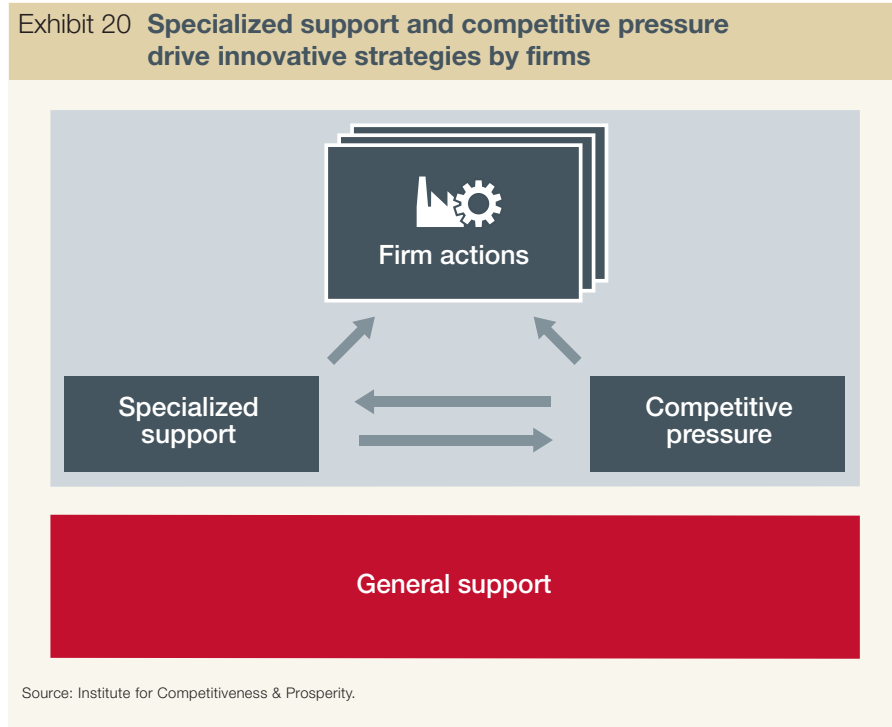
improve our regulatory environment – within industries and across Canada – to supplement pressure and support.

Build stronger management capabilities

We have made the case in previous reports that management capabilities are an important support for innovation and prosperity. Last year, the Institute published a research paper that

articulated the importance of management capabilities to well functioning market structures and assessed Canada's success in developing this capability.⁵⁸

Management includes goal setting, organization building, resource allocation, and results assessment. It encompasses actions in financing the enterprise, product development, production, sales and promotion, and



⁵⁸ Martin and Milway, *Strengthening management for prosperity*.

delivery. A jurisdiction's innovation success will be built on these capabilities as well as the quantity and quality of its science and engineering capabilities. Management skills are not more important than research, science, and engineering. But the evidence strongly suggests that public policy has not found the right balance between the two sets of skills.⁵⁹

Management skills are important enablers of:

- allocating sufficient resources to research and development and innovation;
- determining research priorities in an organization;
- linking consumer needs and research capabilities;
- assessing competitive strengths and weaknesses to identify research and innovation priorities;
- leading go/no go decision making;
- establishing optimal financing sources for research and commercialization.

Good management strives for both efficiency gains from process improvements and for development of value added products and services that, as we have seen, are the drivers of productivity growth – the key challenge to Canada's prosperity.

Our research indicates that across successful high technology companies in Canada and the United States, science and engineering graduates were the dominant founders of successful high technology firms. However, as these firms matured, educational backgrounds of CEOs were more varied. In fact, at the largest seven high technology firms on the *Fortune 100* – IBM, HP, Dell, Microsoft, Intel, Motorola, and Cisco – none of the CEOs has a scientific or technical degree. Three of the seven CEOs hold an MBA, and a fourth has an undergraduate business education. One has an undergraduate history degree, one has an undergraduate degree in economics, and Michael Dell did not graduate from university.

Below the CEO level, evidence is mounting that the economy is requiring greater numbers of conceptual thinkers. A McKinsey study of job creation in the US economy concluded that fully 70 percent of jobs created between 1998 and 2004 were "tacit skills jobs" – those requiring a significant level of conceptual skill and thinking to perform.⁶⁰ Another study shows that the most highly valued and paid jobs in the US economy are going to people with a combination of the cognitive skills of the tacit sort referred to above and people skills.⁶¹ A more recent paper by the same authors concludes that the increase in productivity associated with higher wages in urban centres is most pronounced among workers with strong cognitive and people skills.⁶²

Innovation and productivity growth are not the result of technical or management skills alone. Both sets of skills are required. Michael Porter, a leading authority on corporate and country competitiveness, summed up the necessary interaction between technical and management skills in his annual chapter in the World Economic Forum's *Global Competitiveness Report, 2005–2006*:

*Our regressions suggest that achieving high levels of innovation is not only a matter of companies spending more on R&D. It is also closely connected to their ability to transform technological advances into attractive new products and services, using flexible work organizations and the delegation of authority, combined with sophisticated marketing and advanced production processes.*⁶³

As we have discussed in our previous work and summarized in our research on the importance of management capabilities,⁶⁴ the evidence indicates we have not achieved the optimal combination of management and scientific skills:

- Our managers have lower educational attainment both overall and in business education specifically than their US counterparts;
- CEOs of our largest corporations tend less to have formal business education at the graduate level than CEOs of large US companies;

⁵⁹ *Ibid.*, pp. 12-17 and Institute for Competitiveness & Prosperity, Working Paper 6, *Reinventing innovation and commercialization policy in Ontario*, October 2004.

⁶⁰ B. Johnson, J.M. Mankiya, and L.A. Yee, "The next revolution in interactions," *McKinsey Quarterly*, 2005, Issue 4, pp. 20-33.

⁶¹ Marigee Bacolod and Bernardo Blum, Two Sides of the Same Coin: US "Residual Inequality and the Gender Gap," January 2005. Available online at: www.rotman.utoronto.ca/bblum/personal/front.htm

⁶² Marigee Bacolod, Bernardo Blum, and William Strange, "Skills in the City," March 2007, Available online at: www.rotman.utoronto.ca/bblum/personal/front.htm

⁶³ Michael E. Porter, "Building the Microeconomic Foundations of Prosperity: Findings from the Business Competitiveness Index," in A. Lopez-Claros (ed.), *The Global Competitiveness Report, 2005–2006*, World Economic Forum, September 2005. New York, NY: Palgrave Macmillan, p.55.

⁶⁴ Martin and Milway, *Strengthening management for prosperity*, pp. 9-17.

- Canada's successful innovative firms report that having less access to management talent is a key constraint;
- Canada has fewer business graduates than the United States, while we produce more science and engineering graduates;
- Scientists and engineers are well represented in Canada's work force relative to the US work force.

Analysis conducted by the Ontario Ministry of Economic Development and Trade shows that it is more difficult to gain entry into an Ontario university business program than to engineering or arts and sciences, indicating that an inadequate number of spaces are being created in business programs.

There needs to be a stronger recognition

that innovation occurs in a system driven by the interaction of support and pressure. It is not the result of a linear process where research findings are pushed out to industry; nor is it simply a matter of strengthening business skills among scientists. It is ensuring that we have capable business people who can interact effectively with scientists and engineers. We encourage policy makers to broaden innovation strategy so that it is informed by a more systematic view of the innovation process.

Attract more sophisticated venture capital

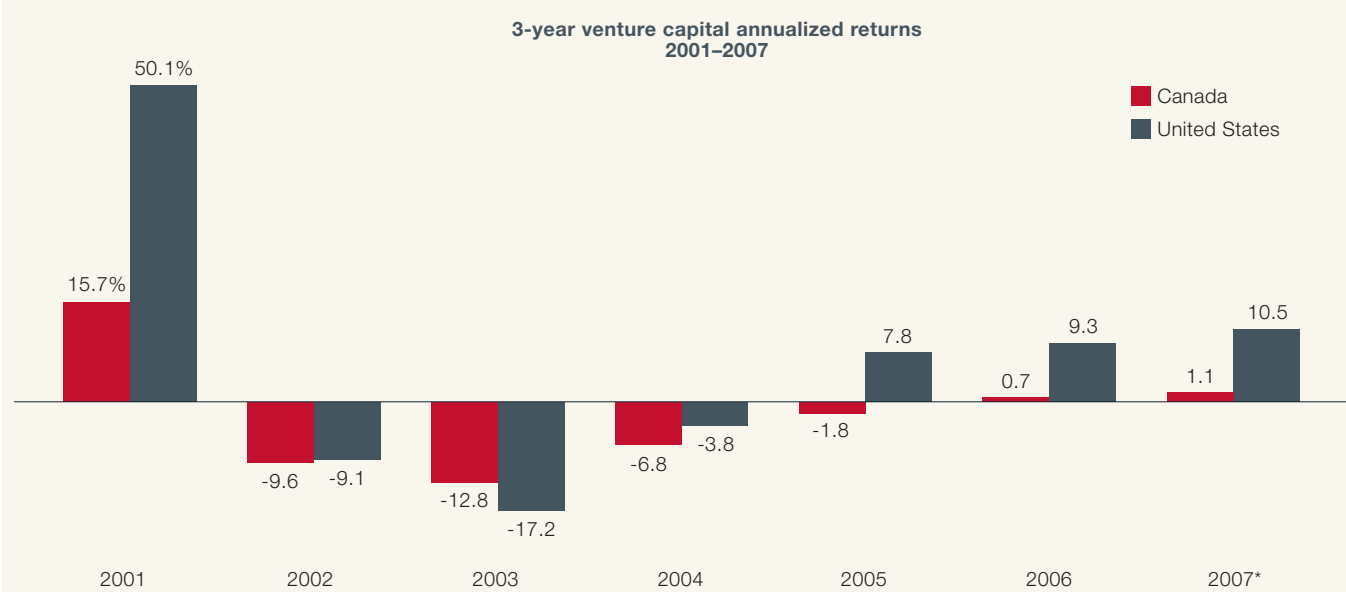
We have urged that public policy related to venture capital in Canada be focused on its quality, not its quantity. Returns on venture capital in Canada consistently trail those in the United States (*Exhibit 21*). Some recent developments

are encouraging for the future quality of Canada's venture capital – the demise of special tax treatment for labour sponsored investment funds (LSIFs) in Ontario and facilitation of greater investment by US venture capital firms.

We have been critical of LSIFs in previous reports.⁶⁵ The evidence indicates that they are structured to raise a significant quantity of venture capital, but its quality is low. Ontario is ending its tax credit for LSIFs with final elimination by 2011. We urge the federal government and other provinces with tax credits for LSIFs to do likewise.

In a recent paper, Douglas Cumming identified various alternatives to LSIFs for facilitating investment in innovative enterprises.⁶⁶ Among the alternatives we find most promising are capital gains tax reductions, less stringent

Exhibit 21 Venture capital returns in Canada are well below those in the United States



*Period ending June 30, 2007
 Source: Institute for Competitiveness & Prosperity analysis based on data from Thomson Financial, Venture Xpert; Thomson Financial, VC Reporter; Statistics Canada, Provincial Economic Accounts (CANSIM Table 384-0002); US Department of Commerce, Bureau of Economic Analysis.

⁶⁵ Report on Canada 2007, *Agenda for Canada's Prosperity*, p.41.
⁶⁶ Douglas Cumming, "Financing Entrepreneurs," *C.D. Howe Institute Commentary* No. 247, C.D. Howe Institute, April 2007.

valuations of stock options for tax purposes, and streamlined regulatory reform.

Cumming cites several research studies that suggest direct causality between lower capital gains taxation and more venture capital. This linkage is because venture capitalists typically invest with a view to earning their investment return through capital gains when they exit, not dividends earned over the life of their investment. Regarding stock options, Cumming cites research that indicates that the US Internal Revenue Service “passively acquiesces in valuations of employee stock options that motivate people to start companies...[while] this type of tax incentive is less prevalent in Canada.”⁶⁷ Among the regulations cited, are possibly onerous prospectus requirements, foreign ownership restrictions, and restrictions on institutional investors in private equity.⁶⁸

The March 2007 federal budget provided a positive development for venture capital in Canada. In last year’s Report on Canada, we reviewed the findings of the research conducted by Thomson Macdonald on our behalf.⁶⁹ A major finding of that study was that an opportunity exists to attract more venture capital to Canada by allowing US Limited Liability Corporations (LLCs) to qualify for the preferential tax treatment set out in the Canada-United States Income Tax Convention. US-based venture firms are typically structured as LLCs; these corporate structures were not explicitly included in the tax treaty. Without inclusion, these firms were exposed to the possibility of being taxed in both countries. The March 2007 federal budget announced an agreement in principle to

update the tax treaty to extend its benefits to LLCs. The formal agreement with the US government was signed in September 2007.

This is a positive development for innovation in Canada. US venture funds have been important sources of capital for our young, innovative firms and their importance has been increasing.

There may be an opportunity to attract more venture funding from pension funds in Canada. In a recent submission to the Ontario Expert Panel on Pensions, the Ontario Municipal Employees Retirement System (OMERS) suggested that specific quantitative rules on public pension plans’ investments may be unnecessarily restricting their ability to participate in venture capital investing. Among the rules cited were the restriction of pension plans to hold no more than 30 percent of the shares eligible to elect the board of a corporation. According to OMERS, this “presumes that pension funds are passive investors, a strategy that is no longer effective in producing the returns needed to safeguard the pension promise.”⁷⁰ While some would argue that there needs to be restrictions on how much control pension funds can exert over their investments, we think it is a worthwhile issue to investigate further.

Identify opportunities for encouraging Toronto’s financial services cluster

Our assessment of the financial services cluster during the past year identified the importance of openness to greater international competition,

including ownership. We concluded that Toronto’s financial services industries are critical drivers of prosperity in the city, in Ontario, and in Canada. But their success cannot be taken for granted as the industry undergoes ever increasing globalization. Government policy makers and industry participants need to step up their efforts to build a world beating financial services cluster in Toronto.

The study assessed the strengths of Toronto’s financial services cluster – banking, insurance, investments, securities dealers, and risk capital – against leading clusters in North America using the framework developed by Michael Porter. Our study confirmed that Toronto has one of the most vibrant financial services clusters in North America. We have strong and successful Canadian firms in each area of the cluster. Traditionally, our banks are world leaders in shareholder returns and our life insurance firms are world leaders in market capitalization.

Yet the cluster has opportunities for improvement. Wages – an indicator of industry productivity and competitiveness – match those in the United States in parts of the cluster but trail significantly in higher wage sub-clusters. Our banks are not near the top of lists of global leaders, and our securities brokers have not succeeded in working with Canadian firms to meet their financing needs as they expand abroad.

On a positive note, Toronto’s financial services cluster benefits from solid related and supporting industries, especially in business services, information providers, and computer and communications services. These

⁶⁷ *Ibid.*, pp. 13-14.

⁶⁸ *Ibid.*, pp 14-17.

⁶⁹ Report on Canada 2007, *Agenda for Canada’s prosperity*, pp. 41-42.

⁷⁰ OMERS Submission to the Ontario Expert Commission on Pensions, October 2007, p. 20. Available online at: www.omers.com/Assets/Plan+Governance/ExpertCommissiononPensionsReport.pdf

industries are important suppliers to financial services and, to the extent that they are strengths for the Toronto region, they help the success of its financial services cluster.

We concluded that Toronto's financial services cluster benefits from an excellent foundation of geographic location, comparable costs, and sound macroeconomic conditions. Moreover, the cluster can boast a well educated work force relative to other Canadian industries and a high incidence of professional designations.

The cluster also benefits from demanding and sophisticated consumers of all kinds of financial services. US households and corporations demand greater quantity and quality of financial service providers than consumers in Canada, but it is fair to say Canadian consumers are among the world's leaders in sophistication of demand.

Our research indicates that limited competition in the domestic market has reduced our banks' incentive to develop world beating strategies that can translate to greater innovation and global leadership. Bank rivalry in Canada is based on relatively undifferentiated competitive strategies. Canadian banks compete intensely in the domestic market – but this competition is based more on operational effectiveness and replicating best practices. World leaders in banking from countries such as Switzerland, France, the United Kingdom, the Netherlands, and the United States, come from environments of differentiated strategies.

Canada's securities sector, dominated by domestic firms owned by banks, has

not developed world beating strategies that position them as global leaders.

Leading firms in Canada's life insurance have developed more differentiated strategies, and they have benefited significantly from changes in Canada's regulations, which allowed them to convert into stock companies from policyholder ownership. This dramatic change in the regulatory framework allowed them, particularly Manulife and Sun Life, to strengthen their global presence. Both are in the top ten by market capitalization, as is Great-West Life.

The major challenge for the cluster is getting the regulatory environment right. The study concluded that, while our banks compete intensely in the domestic market, they have not developed breakout strategies to place them among the world's largest banks. By precluding foreign banks' entry into the Canadian market through the acquisition route, our regulatory framework reduces the benefits of external forces to stimulate greater differentiation among our banks. In many cases in financial services and in other industries, global leaders have emerged from a domestic market that drives differentiated and innovative strategies.

It is discouraging that the federal government has not set bank mergers and ownership as a priority. There are no obvious risk free policies in this area. Easing the rules on ownership of Canada's banks would likely lead to fewer domestic banks and greater foreign ownership. However, doing nothing is equally risky, as our industry will not be fully participating in the ongoing globalization of financial services and we could fall further behind.

Continue to pursue bilateral free trade agreements

Free trade provides both specialized support and competitive pressure to enhance Canada's innovative capacity. Free trade increases the size of markets available to support Canadian firms. Our work shows that small market size in Canada is an ongoing challenge to our productivity and innovation. This is a key reason why exporting to the United States has been so important to the success of Canadian firms – the impact of increasing scale by adding US customers to our potential sales is huge.

Free trade also strengthens the competitive pressure for our firms, workers, and managers to become more competitive. By opening our markets to more competitors, we increase rivalry from competing firms. That also exposes our firms to more sophisticated customers who provide pressure for greater upgrading and innovation.

In his study of the long term effects of the agreement, Dan Trefler, professor of economics at the Rotman School of Management at the University of Toronto, concluded that the free trade agreement improved productivity, wages, and consumer welfare in Canada and the United States.⁷¹ To be sure, free trade had adverse employment effects in its first few years. However, subsequent growth in manufacturing employment relative to that in other parts of the world suggested to Trefler that the lost employment was made up for by employment gains in other parts of the manufacturing sector.

⁷¹ Daniel Trefler, "The Long and Short of the Canada-U.S. Free Trade Agreement," *American Economic Review*, Vol. 94, No. 4, 2004.

Trefler's research showed some other effects of free trade. The pressure of greater competition resulted in the exit of firms that were not competitive in the new setting. These exits accounted for 6 percent of the 14 percent productivity improvement that Trefler found in Canada. But firms with competitive productivity rates before free trade expanded as a result of greater export opportunities. This accounted for 4 percent of the productivity growth. Finally, some low productivity firms improved their performance as a result of the competitive pressure and with this improved performance increased their exports. This accounted for the final 4 percent of the 14 percent overall productivity growth.⁷²

Ideally, multilateral free trade could be the most effective way to broaden our markets. But the complexity of negotiating such arrangements and the time required to complete the deals mean it is difficult to make them happen. The federal government has announced its desire to negotiate more bilateral free trade agreements and we encourage the provinces to support these efforts.

Interprovincial trade barriers are also impediments to our prosperity. The BC-Alberta Trade, Investment, and Labour Mobility Agreement (TILMA) came into effect earlier this year and will be implemented over the next two years. Among other things TILMA opens up municipal and provincial government procurement to suppliers in both provinces. It ensures that occupational standards in one province

apply in the other and eliminates local presence requirements. As with international trade, a multilateral approach to reducing interprovincial barriers would be the best way to proceed. However, unless there is optimism that the Canadian governments can improve results under the existing framework – the Agreement on Internal Trade – it is worth while for other provincial governments to investigate the benefits of joining TILMA.

Our prosperity depends on market structures that balance support and competitive pressure for specialized innovation and upgrading. Too much support means a cushy environment focused on preserving the status quo. Too much pressure means a bleak environment for innovation. Canada needs to work to find the right balance for both.

Innovation that drives prosperity growth does not come about by attempts to preserve the status quo. We need to increase risk taking and dynamism in Canada's economy so that more of our existing businesses are investing for future prosperity, and new successful businesses are being created by entrepreneurs. This will come about through more competitive pressure in our markets.

⁷² Daniel Trefler, "Freer Trade: A Path to Broad-Based Prosperity," Presentation to Conference on Canada's Prosperity Challenge, March 2007. Available online at: www.competeprospers.ca/images/uploads/Trefler_OTF_FTA.pdf

Playing the global competitiveness game

CANADIANS WORRY ABOUT where our economy is heading and what Canada will look like for our children in this rapidly globalizing world. One compelling reason for their concern is the apparent “hollowing out” of Canada, as business icon after icon falls into foreign hands. Since 1985, Canadians have lost control of many familiar companies in Canada, including Hiram Walker, Labatt, Dofasco, The Hudson’s Bay Company, Inco, and ATI.

As these companies pass to foreign control, Canadians are asking: Is no Canadian company safe? Will they all be brought up and run as branch plants? Will our children find quality careers with great Canadian companies? Or will they be forced to toil for companies controlled by unknown owners outside our borders?

Our research has led us to conclude that the Canadian economy is not being hollowed out. In fact, we continue to find that Canada has been successful in creating more global leaders than it is losing to foreign takeovers.

In our past work, we assessed the success of Canadian companies with revenues greater than \$100 million. Here our analysis focuses on companies with revenues greater than \$1 billion⁹ (*Exhibit E*). This captures the

large companies that are most familiar to Canadians, but an analysis of smaller companies shows the same pattern.

The results show that the overwhelming majority of the companies acquired by foreigners fell into two groups:

- a Canadian company that was not globally competitive;
- a Canadian company that had been a legitimate global competitor, but by the time of its foreign takeover had ceased to innovate and upgrade to maintain its competitiveness.

A company is in the first category if it did not rank in the top five in its industry and thus was not a global leader at the time of its takeover by a foreign entity. A few examples are Shoppers Drug Mart, Stelco, and Labatt.

The second category includes companies that are large (over \$1 billion in revenues) and globally competitive (in the top five in their industry globally in revenues), but for some reason had ceased to innovate and upgrade their competitive positions. Examples are Falconbridge, Hiram Walker, Inco, Moore Corporation, and AMCA. There is a tiny third category that includes competitive and innovative companies that were acquired by

⁹ Report on Canada 2007, *Agenda for Canada's Prosperity*, pp. 46-47. See www.competeprosper.ca/images/uploads/GlobalLeaders_010507.pdf for the complete list of Canada's global leaders with revenues above \$100 million.

Exhibit E Canada has more billion dollar global leaders today


Notes: Companies that have sales revenue above \$1 billion (2008 C\$) and are in the top five of their market globally.
 Foreign acquisition of CHC Helicopters is expected to be complete by mid-2008.
 Source: Institute for Competitiveness & Prosperity analysis.

foreign entities. In the past twenty-two years, there have been only four of these. Two, Intrawest and Masonite, do not really qualify as foreign takeovers, as they were not taken over by industry players but were recapitalized by private equity firms, and their head offices remain in Canada. So it is hard to argue that they are clear cases of “hollowing out.” Only ATI and Alcan, acquired by Advanced Micro Devices and Rio Tinto respectively, were globally competitive innovating and upgrading companies whose new foreign owners turned their Canadian operations into branch offices.

The reality is that, in a globalizing world, some companies that do not particularly deserve to be taken over – like ATI and Alcan – will be acquired. Though it seems terrible to Canadians when our great icons or brilliant new start-ups get taken out by foreign broad-based behemoths, we should remember how Americans and Britons felt when Thomson bought their West Publishing and Reuters, turning both into subsidiaries of a Canadian company.

The real question is whether more Canadian companies will be taken over than will be built. And on that front, the news is overwhelmingly positive. Over the same time period, thirty-seven other globally competitive Canadian companies were grown, including RIM, Magna, Manulife Financial, Thomson, and Barrick Gold.

The answers to the fundamental questions that worry Canadians have a clear answer. If Canada continues to grow globally competitive companies that get there and stay there by continuously innovating to upgrade their competitiveness, Canada will prosper and our children will have many great

jobs to choose from in Canadian owned companies.

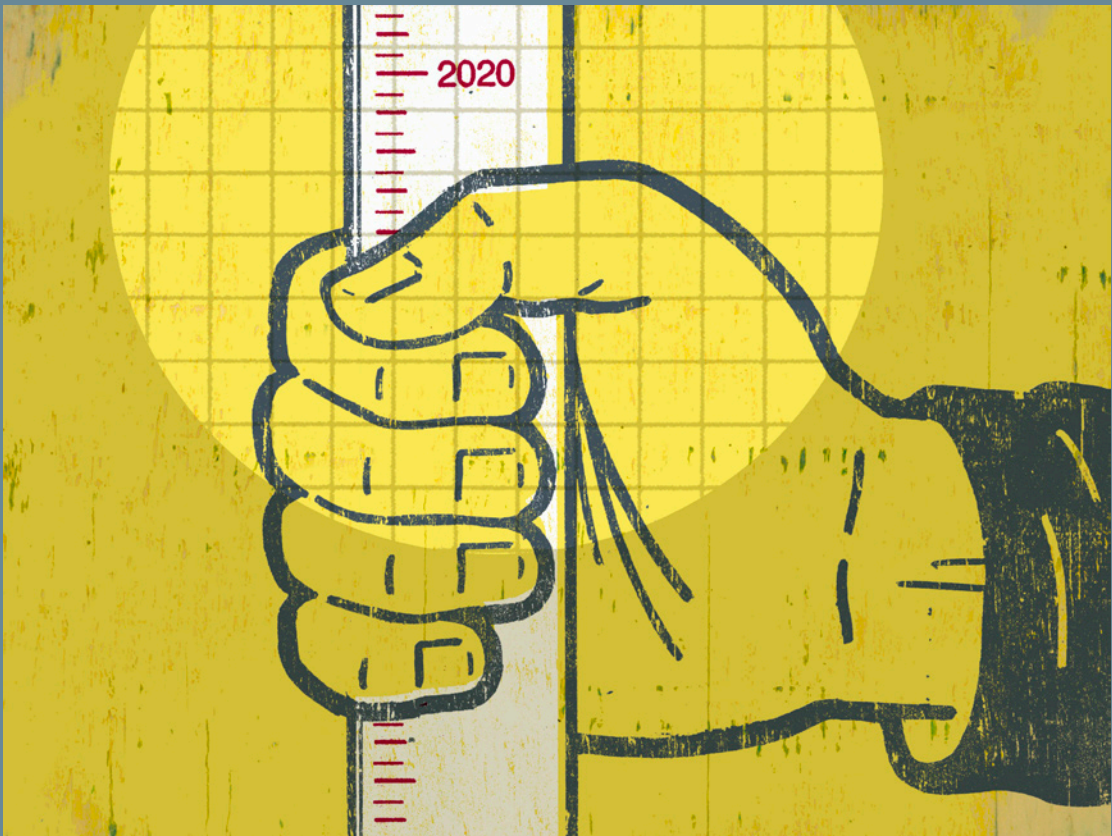
Thus it is imperative that we create an environment that nurtures the global aspirations of Canadian companies and supports them in continuously innovating to upgrade their competitiveness. In last year's and this Report on Canada, we propose an ambitious Agenda for creating this environment that addresses lowering the cost of investment, supporting innovation more broadly – beyond scientific and technology and including management support – and increasing competitive pressure to provide the higher demand for innovation.

Beyond our Agenda, we think it would be helpful if senior politicians and government officials made it a priority to know personally the CEOs of the seventy-five \$100 million plus global leaders. They should pay disproportionate attention to these Canadian global leaders and understand what those companies are trying to accomplish globally and assist them in any way that is feasible and practical for a government to do. They should also know the companies that have credible plans to make it to a position of the top five in their industry globally, as they represent the future of Canada.

This is not a call for government creation of “national champions.” Instead, it is an opportunity for economic policy to be informed by the experiences of those companies and business leaders who are aggressively pursuing globalization, rather than those who are cowering under its threat. The kinds of policies that result from this support innovation and upgrading across the economy. In many ways, this is the

least expensive initiative in terms of tax dollars but the most time-consuming for senior government officials. However, in the globalizing economy, the time they devote to knowing what it takes for Canadian companies to succeed globally will probably be the most valuable hours that they spend on Canada's future prosperity.

Our prosperity will be determined by the degree to which our companies aspire to play in the global game and play it well. Canada is already building globally competitive companies that are innovating and upgrading to maintain their competitiveness at the highest level. Those that are not in the game will surely be bought out by foreign entities.



Staying on track

The Prosperity Agenda is a long term plan that will take years to implement and see results. But we can begin now.

WE CONTINUE TO CONCLUDE that the Agenda for Canada's prosperity we set out in last year's Report on Canada is the right one and ought to be pursued vigorously. The Canadian government with its favourable fiscal position is well placed to lead in taking up the challenge.

But this challenge is for all Canadians; business leaders and ordinary citizens need to step up as well. In the coming year, we challenge the government and all Canadians to take the first steps toward achieving our prosperity potential.

In the true spirit of innovation, we need to be pushing ourselves to find new ways to address prosperity issues. In many cases, we know that current approaches are not working. We are realistic enough to know that bold new ideas cannot be implemented in the public sphere overnight. But we now have the opportunity to propose new approaches, to discuss them with stakeholders in Canada's prosperity, and to implement the most promising ideas.

Attitudes: Accept the challenge; overcome complacency

We urge the Prime Minister and Premiers and business, labour, and community leaders to turn up the volume on the importance of prosperity and productivity.

Achieving prosperity is not a problem most Canadians are thinking about. But we are missing opportunities to

realize our full potential and to ensure that we thrive, not just survive, in the globalization of our economy. Nor does the challenge of achieving higher productivity capture the public's imagination, largely because it is associated with ideas like efficiency, downsizing, and out sourcing. But we must have the sustainable productivity growth that

comes from innovation – creating unique products, services, and processes that truly add value to people's lives. Higher productivity is our main opportunity for realizing our prosperity potential.

Investment: Focus on people and technology

We encourage more investment to support high risk groups, enhance educational opportunities, and upgrade technology.

Invest in innovative ways to attack poverty

The best weapon against poverty is a buoyant economy – an important reason for achieving our prosperity potential. But a significant share of the incidence of poverty is among high risk groups. Each has its own challenges. For recent immigrants, the challenge is to match their skills with the economy's requirements. For lone parents, it is how to create incentives to work, while providing high quality child care as well as early childhood education. For at risk youth, a key challenge is to encourage them to complete high school or to gain the skills that are in demand. There are examples of successful programs that have been developed here in Canada and elsewhere. We urge social service policy leaders to identify and implement them in other appropriate places – but also to challenge themselves to create innovative programs here in Canada.

Raise awareness among all Canadians of the benefits of education

Guidance counselors, parents, and community leaders need to stress the benefits of more education. Post secondary education is a means to escape poverty and improves intergenerational mobility. Yet research indicates that lower income Canadians over estimate the costs and under estimate the benefits of post secondary education. In addition, our youth must understand the life-long risks they take by dropping out of high school without a diploma or a skilled trade.

Continue investments in post secondary education

There have been some increases in public investment in education – and we need to sustain the momentum. We are still not investing adequately to ensure that Canada is a world beater in innovation.

Assess the tradeoff between university research and teaching

As we step up our investments in post secondary education, we urge public policy leaders, academic leaders, and the research community to assess how well our current balance between research and the student experience is serving the needs of our schools, students, and society. We have a very strong research base in our universities.

The same is not true for the quality of our students' experience. Is there a tradeoff? Or can we find innovative ways to achieve both?

Step up investments in information and communication technology

Our businesses are not taking full advantage of the improvements that technology can make to their top and bottom lines. We challenge business leaders to invest in Canadian technology and to take advantage of the strong Canadian dollar to invest in technology from around the world.

Motivations: Pursue smarter taxation

Canada needs to readdress its tax regime, which is among the worst in the world.

Remove capital taxes immediately

This is a recurring recommendation of ours – and of most people who study tax policy. Capital taxes denigrate Canada's environment for new business investment, and provinces still imposing these taxes should abolish them now.

Reduce statutory corporate tax rates

Most governments in Canada are reducing their corporate income rates and those that are not should consider doing so. The federal government has an aggressive plan for reducing their rates significantly by 2012. Given

another unexpected surplus in the March 2008 budget, the federal government should consider speeding up these reductions.

Institute value added provincial taxes, harmonized with the federal GST

The federal government has worsened the structure of Canada's tax system by reducing the GST. The five provinces with retail sales taxes can mitigate this mistake by converting them to a value added tax. We recognize that this is a complex and challenging initiative. But Canada cannot compete globally and realize its prosperity potential if we are not open to radical changes in how we tax. We can do much good simply by

following these best practices around the world. But we could do better if we challenged ourselves to implementing an innovative tax regime.

Continue attacking high marginal tax rates for lower income Canadians

Some progress is being made to reduce effective tax rates paid by low income earners. The Working Income Tax Benefit is a good beginning toward making tax incentives work for those who are climbing the income ladder. We need to continue our efforts to fix this problem.

Structures: Place a premium on creativity and innovation

We need structures that provide specialized support and competitive pressure to enhance value creation through unique products and services that lead to higher productivity and prosperity.

Governments in Canada should follow Ontario's lead in ending special tax incentives for Labour Sponsored Investment Funds. Their focus should be on efforts to raise the quality of our venture capital, not the quantity, so that our entrepreneurs are supported well with the right amount of venture capital and the added value from good

venture capitalists. Recent changes by the federal government to ease entry of foreign venture capitalists will help.

Continue to expand innovation policy to build management capabilities

The recently developed innovation strategy in Ontario is a promising break from previous public innovation strategies as it acknowledges the importance of management capabilities and aims to enhance the "culture of commerce." But all governments need to go further in supporting the strengthening of management capabilities as a necessary complement to scientific and engineering talent.

Pursue the reduction of barriers to investment and trade

Increasing opportunities for the freer flow of goods and services across national and provincial borders is an important source of support and pressure for innovation. The Canadian government should continue efforts to expand international free trade agreements, lead national discussions on changing regulations in financial services, and investigate the benefits of joining the BC-Alberta TILMA.



Implementing these initiatives will be challenging for all of us. But they are important steps toward achieving the 2020 Agenda for Canada's Prosperity – and increased well being for all.

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The Institute for Competitiveness & Prosperity is an independent organization established in 2001 to serve as the research arm of Ontario's Task Force on Competitiveness, Productivity, and Economic Progress. The mandate of the Task Force, announced in the April 2001 Speech from the Throne, is to measure and monitor Ontario's competitiveness, productivity, and economic progress compared to other provinces and US states and to report to the public on a regular basis. In the 2004 Budget, the Government asked the Task Force to incorporate innovation and commercialization issues in its mandate.

It is the aspiration of the Institute and the Task Force to have a significant influence in increasing Ontario's competitiveness, productivity, and capacity for innovation. We believe this will help ensure continued success in the creation of good jobs, increased prosperity, and a higher quality of life for all Ontarians and Canadians. We seek breakthrough findings from our research and propose significant innovations in public policy to stimulate businesses, governments, and educational institutions to take action.

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