

Task Force on

COMPETITIVENESS, PRODUCTIVITY
& ECONOMIC PROGRESS

Investing for prosperity

Second Annual Report, November 2003

Task Force on Competitiveness,
Productivity and Economic Progress



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Joseph L. Rotman School of Management

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Daniel Trefler
University of Toronto

The Ontario Task Force on Competitiveness, Productivity and Economic Progress was announced in the April 2001 Speech from the Throne. Its mandate 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.

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

The Institute for Competitiveness & Prosperity is an independent not-for-profit organization established in 2001 to serve as the research arm of the Task Force. The Institute regularly publishes working papers to inform the work of the Task Force. In addition, they are designed to raise public awareness and stimulate debate on a range of issues related to competitiveness and prosperity.

The Task Force welcomes comments on this Second Annual Report. They should be directed to the Institute for Competitiveness & Prosperity.

The Task Force and the Institute are funded by the Government of Ontario through the Ministry of Economic Development and Trade.

Investing for prosperity

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Foreword and acknowledgements



On behalf of Ontario's Task Force on Competitiveness, Productivity and Economic Progress, I am pleased to present our Second Annual Report to the public of Ontario. In it, we summarize the results of our research and deliberations on understanding Ontario's prosperity gap compared to that in our peer group of the largest states and provinces in North America.

We continue to take pride in the achievements of Ontarians in creating one of the world's most successful economies. In fact, outside North America, no other region of comparable size and population has achieved our level of prosperity. But we also continue to urge Ontarians to aspire to close the prosperity gap that exists between us and the most successful economies in the world. The challenge we set out for Ontarians last year was to move up one rank every two years so that we can achieve median performance over the next decade. This year, we note with satisfaction that Ontario has moved up a rank in the peer group standing.

Raising productivity – the ability of our people, firms, and governments to create value from our human, physical, and natural resources – is the key to closing our prosperity gap. But Ontario still faces challenges in that quest.

The major conclusion in this year's report is that Ontarians are not investing adequately to increase our productivity and prosperity. In fact, we come up 10 percent short of our peers on prosperity mainly because our investments stop 10 percent short of theirs. We find that Ontarians have the basics in place – we invest in the right things and almost to the same level as those in our peer group. But then our investments stop short. This is especially true in education and immigration that develop our human capital; in machinery and equipment that build our physical capital; and in our cities and by our governments that raise human, social and physical capital.

Our research this year shows that attitudinal differences with our peer group do not account for this investment and prosperity gap. However, our disadvantage in marginal effective tax burdens, which drive motivation, has widened. And our market and governance structures seem to be limiting prosperity gains. Our future work will explore the complexities of these structures to determine how to make them more effective in building our prosperity.

We gratefully acknowledge the research support from the Institute for Competitiveness & Prosperity and the funding support from the Ontario Ministry of Economic Development and Trade.

In our ongoing research into Ontario's competitiveness, productivity, and economic progress, we are continuing to gain deeper insights into areas of economic strengths and opportunities for future growth. We look forward to sharing and discussing our work and our findings with all Ontarians. We welcome your comments and suggestions.

A stylized, handwritten signature in black ink, appearing to read 'R. Martin'.

Roger L. Martin, Chairman

Ontario Task Force on Competitiveness, Productivity and Economic Progress

Executive summary



→ Ontario's prosperity gap persists



→ Ontario under invests for tomorrow's prosperity



→ Motivations and structures hinder investment for the future



→ The search for break out investment opportunities continues

ONTARIANS ARE NOT INVESTING ENOUGH OF TODAY'S WEALTH FOR TOMORROW'S PROSPERITY. TO CLOSE THE PROSPERITY GAP WITH OUR PEER STATES, WE NEED TO REVERSE THE WIDENING PATTERN OF UNDER INVESTMENT THAT LIMITS OUR POTENTIAL FOR PRODUCTIVITY GAINS.

Ontario's prosperity gap persists

Our work this year further unravels the prosperity gap puzzle. Comparing results in 2000 and 2001, Ontario continues to be the most prosperous region of significant size outside the United States. However, we have a significant prosperity gap compared to a peer group of 14 US states and Quebec. This gap did narrow from \$5,905 per capita in 2000 as reported in our First Annual Report last year to \$4,118 in 2001, and we moved up one rank to 13th out of 16. But this improvement is mainly because Ontario avoided the recession experienced in the US. Still, our per capita GDP trails the median of peer states by just under 10 percent.

Productivity continues to be the source of our prosperity gap. Ontarians are less effective than our peers in adding economic value to our endowment of physical, human, and natural resources.

This prosperity gap matters. Closing it would represent a significant economic improvement to the average Ontario family. In addition, public programs in important areas such as health care and education would be significantly enhanced if the prosperity gap were closed.

Why is Ontario's prosperity 10 percent below the median of our peer group? The Task Force has developed the



AIMS framework to understand Ontario's capacity for innovation and upgrading to increase prosperity (Exhibit 1). After two years of in-depth research, we conclude that it is because our Investment patterns cause us to come up 10 percent short.

This Second Annual Report highlights the findings that led us to this conclusion.

Ontario under invests for tomorrow's prosperity

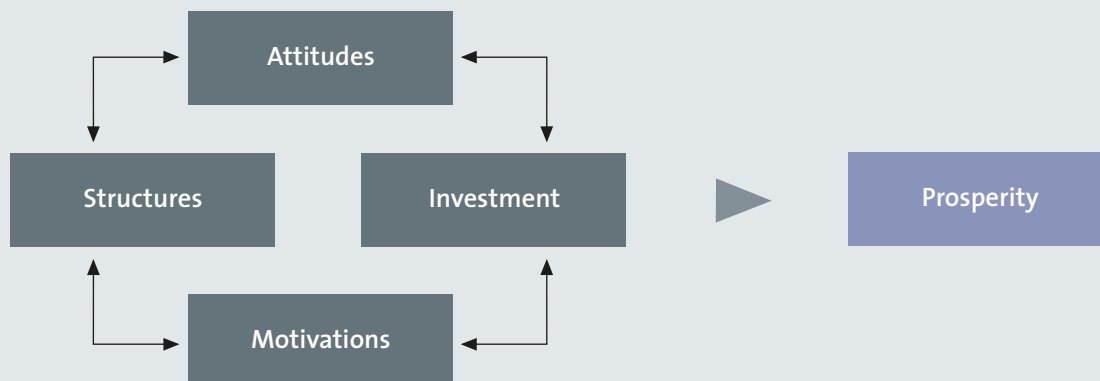
Throughout our economy, we see that Ontarians are trading off future prosperity for today's consumption. Although we invest in much the same way as our peer group of fifteen other North American jurisdictions, we stop investing and begin to consume the fruits of past investments, while our peer jurisdictions keep on investing. We do all the basics, and in fact do them well. But as investment requirements grow and become more sophisticated, we opt not to invest any more. The net result is that, in the balance between investment and consumption,

Ontario directs less toward investment than peer states. This is true for Ontario citizens, Ontario businesses and Ontario governments.

Education is a perfect example. Ontario has traditionally kept pace with the peer states' investment in primary and secondary education – and produced better results with those dollars. Our investment per capita also matches peer state investment in college education. But at the undergraduate university level, with similar participation rates, Ontario spends about half as much per capita and per student (governments, students and donors combined) as the peer states. Then at the graduate level, we have half the participation and likely less than half the spending per participant. Ontario has a great education system and spends much more than most countries. But at the important leading edge of investment in post-secondary education, particularly graduate degrees, governments, students and donors invest less and we get lower productivity.

We estimate that the impact of our ongoing under investment in education is \$965 per capita of the total \$4,118 prosperity gap.

Exhibit 1 AIMS builds capacity for innovation and upgrading to increase prosperity



Machinery and equipment is another area. This includes software, high technology and other investments that drive innovation and productivity. Ontario has sophisticated industries and sophisticated companies in them. And they invest quite heavily. But while they stop investing in machinery and equipment, peer state companies keep on investing 10 percent more. As a consequence, our peers are more productive.

The impact of our continuing under investment in physical capital is at least \$562 shortfall in GDP per capita

Further, the growing **shift in spending by different levels of government** from investment to consumption is limiting productivity gains. As we review spending by all levels of government in Ontario, we observe a pattern that favours consumption over investment in comparison with the peer states. In 1992, for every dollar of spending on consumption, such as on health care and social services, governments in Ontario spent 53 cents in investments, such as education and infrastructure. In the peer states this ratio was similar – 51 cents. But through the 1990s, Ontario's position changed. By 2000, the ratio in Ontario had worsened to 47 cents, while in the peer states it improved to 54 cents.

Immigration in Ontario is a potential source of higher productivity, but we are not enjoying the benefits the new arrivals can offer. We out-invest the US in gaining highly skilled immigrants. Immigration raises educational achievement and skills in Ontario, while lowering them, on average, in the peer states. However, we do not invest enough once immigrants are here to give them the best chance to contribute their full capabilities to our economy. Evidence indicates that immigrants to Ontario are falling further behind in their full integration into the economy in the past decade. This represents a missed opportunity for enhancing Ontario's competitiveness and prosperity.

Finally, **cities** are another source of lower productivity. The base level of productivity in Ontario and in the peer states is the rural areas. Then the question is how much a jurisdiction can build on that productivity base by investing in its cities, which gain from the positive effects of agglomeration, lower costs due to scale, and thicker labour markets? In Ontario, we start with a slightly higher base of rural productivity than the peer states. But, as an example of the under investment in our cities, Canada's fiscal taxing and spending framework leads to an annual outflow of \$1,500 per capita from Ontario's urban areas. As a result of these kinds of investment decisions, Ontario's cities are 12 percent less productive than peer group cities.

In summary, it is not as though we do not invest or that we invest in the wrong things. But after basic investments, we choose a dollar or hour more of consumption versus a dollar or hour of investment.

The question is why are Ontarians under investing?

Motivations and structures hinder investment for the future

In our First Annual Report last year, we hypothesized that much of our challenge lay in another AIMS factor, attitudes. We postulated that Ontarians' different attitudes towards competition and competitiveness would lead to this pattern of lower investment. We carried out a significant amount of research in this area and concluded that attitudes had very little to do with our under investment and the prosperity gap. In only one area – educational aspirations - were attitudes significantly different. If attitudes are essentially the same, then why is investment lower?



In this Second Annual Report, we look further into the other two AIMS factors, motivations and structures.

On motivations, research indicates that Ontario is a distinctly poor environment in North America for capital investments. One reason is that the marginal effective tax burden in Ontario is a big motivation not to invest in capital like machinery and equipment. We found that our disadvantage in the tax burden on capital widened by almost 11 percent in 2003. This report cites several reasons why the effective tax burden on both capital and labour is higher in Ontario than in peer group states. One emerging conclusion is that rethinking taxation strategy is one important way to find opportunities to increase investment to close the prosperity gap.

On structures, there is evidence that governance structures, such as Canada's fiscal framework, are negatively affecting our urban prosperity. We also see that market structures may be impediments to productivity gains. For example, our clusters of traded industries may be under performing. Further, lower competitive intensity in our markets may contribute to lower productivity compared with the peer group. Finding significant opportunities for investment in innovation and upgrading in our governance and market structures is the area where we see the greatest need to do further work.

The search for break out investment opportunities continues

Our key conclusion from this year's work is that Ontarians need to break out of the under investment trap. Currently, we are trading off consuming more today rather than investing enough for tomorrow's prosperity.

The Task Force urges all stakeholders to reverse the under investment pattern that permeates our economy and

reduces our potential to equal the prosperity experienced in our peer states. We encourage all Ontarians to examine their own strategies and actions to ensure we are investing competitively in human, social, and physical capital. We recommend that Ontarians

- Encourage students to invest in their higher education
- Take initiatives to address the chronic under investment in machinery and equipment
- Rethink our tax system to encourage investment
- Ensure market structures support break out investment and performance
- Invest in processes for integrating immigrants more effectively into our economy

In our search for ways to raise our productivity and prosperity, the Task Force will focus its efforts on finding opportunities for strengthening market structures, increasing the contribution of our urban areas to prosperity, and implementing innovative approaches to tax reform. The Institute's research will seek ways to address the under investment challenge by answering several important questions: How can market structures increase investment and prosperity? How can we achieve the right level of competitive intensity in our clusters of traded industries and globally competitive firms? What are the greatest opportunities for tax reform to spur motivations to invest for prosperity? How can Ontario gain an advantage in marginal effective tax burdens?

Investing for prosperity is an important way for Ontarians to continue closing the prosperity gap with the peer states. The Task Force and the Institute are committed to developing the analytical base and insights that will lead to innovation and upgrading to raise productivity and prosperity throughout the province.



Ontario's prosperity
gap persists →



Ontario's prosperity gap persists

While Ontario has narrowed the prosperity gap, we continue to miss opportunities to improve productivity – our key challenge for closing that gap.

In our First Annual Report, we highlighted the importance of competitiveness in today's economy. Being globally competitive is a prerequisite for Ontarians' economic well-being. Competitiveness means being able to gain significant value from producing goods and services that are in demand by people around the world – in Ontario, Canada, and other countries. It also means producing these goods and services by adding maximum value to the physical, human, and natural resource endowment we have in the province. And it means developing new products and services as well as finding better ways to produce what we do. The recurring terms used by economic commentators today – competitiveness, productivity,

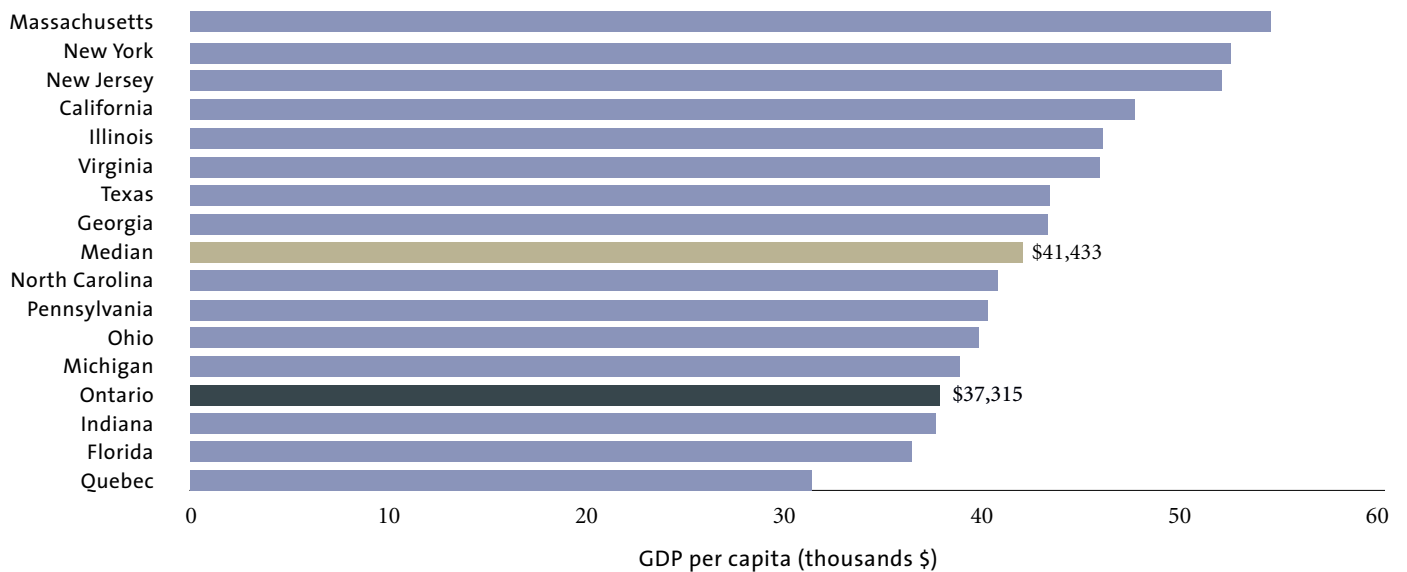
prosperity, and innovation – are highly inter-related and in, some sense, interchangeable.

Ontario's economy does well on all these fronts. Our products and services are world competitive. We are among the most productive regions in the world. Our prosperity is almost unparalleled. We have innovative products and processes.

Yet Ontario lags the economies that are the world's leaders. The Task Force has identified a prosperity gap with the leading regions in North America that resemble Ontario most. While the gap has shrunk since our last Annual Report, it is still significant and it still matters to our future well

Exhibit 2 Ontario ranked 13th of 16 in its peer group in 2001

GDP per capita for Peer States and Provinces C\$ (2001)



Source: Statistics Canada; US Department of Commerce – Bureau of Economic Analysis (May 2003); OECD PPP indices: Institute for Competitiveness & Prosperity analysis

being. And, as we reported last year, the prosperity gap is inexorably linked with lagging productivity.

Ontario is still one of the world's most prosperous regions

In the First Annual Report, we found that Ontario's economy ranked among the strongest of comparable regions in the world. If treated as a country, Ontario continues to stand second only to the United States in GDP per capita among countries with at least half Ontario's population.¹

The strength of Ontario's economy is further demonstrated by comparing its performance with Europe's main engines of growth. Most recently available results (2000 data) show that, while they remain prosperous within their domestic context, Europe's "Four Motors" continue to trail Ontario in economic output.² Clearly, Ontario continues

to be one of the most prosperous regions outside North America.

Ontario continues to trail peers in prosperity

Within North America, Ontario's prosperity continues to lag its peers' rankings. As we discussed in the First Annual Report, the Task Force's main focus is on comparisons to 15 other North American jurisdictions that resemble Ontario in size (population over 6 million or at least half Ontario's size) and economic diversity. These jurisdictions, in addition to representing Ontario's leading trading partners, have similar backgrounds, resource endowments, and economic mixes. The similarities do not extend, however, to the relative level of economic progress Ontario has achieved relative to its peers (Exhibit 2).

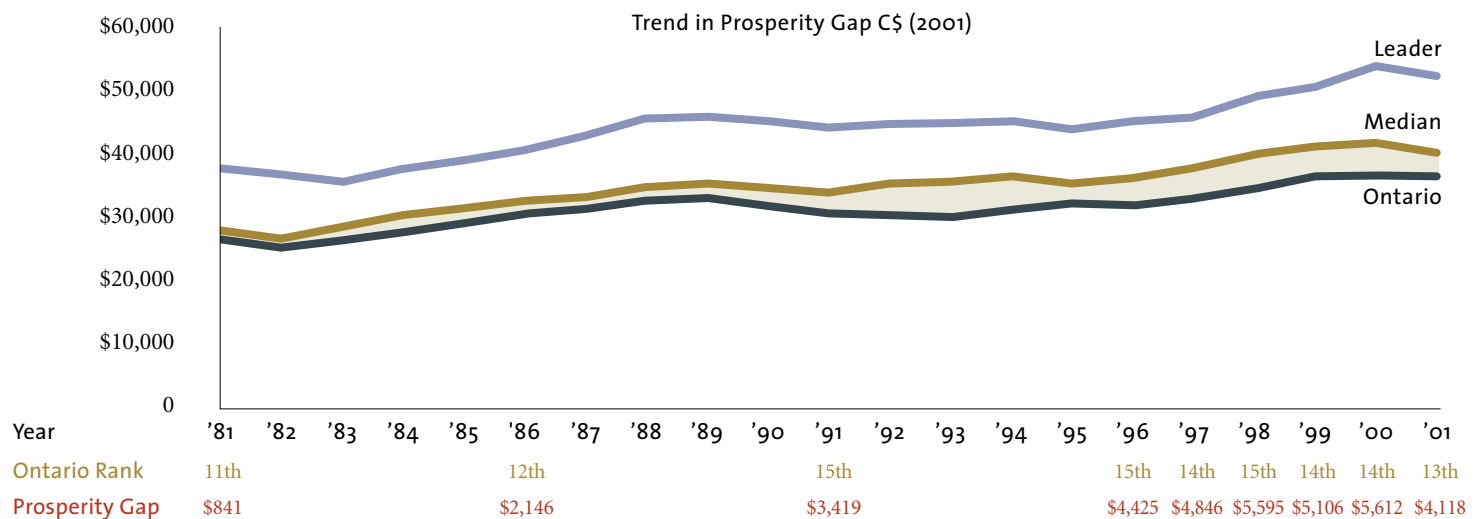
In 2001, Ontario ranked 13th out of 16 in GDP per capita, against the peer group, one

place ahead of its 2000 position reported in the First Annual Report. This translates into a prosperity gap relative to the peer median of 9.9 percent, or \$4,118, down from 13.1 percent, or \$5,612 in 2000.³ The apparent narrowing of the gap in 2001 should not be overemphasized, however, since it is mainly a consequence of weak U.S. results rather than increased Ontario prosperity. All but three states (New York, Virginia, and Florida) in the peer group experienced a decline in GDP per capita during 2001, while Ontario achieved a 1.4 percent increase (Exhibit 3). Still, in last year's First Annual Report, we recommended that Ontarians aspire to reach median performance by 2012 through a one-rank increase every two years. By avoiding a recession, Ontario managed to achieve this one-rank increase in 2001.

The prosperity gap matters

The clear story is that Ontario draws on essentially the same natural, capital, and

Exhibit 3 Ontario's property gap narrowed in 2001



Source: Statistics Canada; US Department of Commerce, Bureau of Economic Analysis, Regional Accounts; OECD PPP adjustments; Institute for Competitiveness & Prosperity analysis

¹ In 2001 according to OECD, per capita GDP in Canadian dollars was: US \$41,741; Ontario \$37,315; Switzerland: \$35,399; Canada: \$34,231; Belgium: \$33,395; Austria: \$32,923. Note that constant 2001 Canadian dollars are used throughout this Annual Report. Other currencies are converted into Canadian dollars using Purchasing Power Parity (PPP). For 2001, the PPP rate for converting US dollars to Canadian dollars was 0.836 to 1). See The Task Force's First Annual Report, *Closing the prosperity gap*, p.18 for an explanation of Purchasing Power Parity.
² 2000 GDP per capita results in 2000 Canadian dollars are as follows: Ontario: \$37,093; Lombardia (Italy):\$36,861; Baden-Württemberg (Germany): \$33,435; Rhône-Alps (France): \$28,262; Cataluña (Spain): \$27,266.
³ Ongoing revisions by government statistical agencies lowered the prosperity gap for 2000 reported in last year's Annual Report from \$5,905 to \$5,612.

human resources as the peer states and yet adds significantly less value to them in economic output. If Ontarians were able to overcome the \$4,118 gap in GDP per capita, an average Ontario household would gain about \$6,600 in annual, after-tax disposable income. Families could then choose to enjoy the additional income in many different ways. For example, among mortgage holders, more than half their average mortgage payment (\$11,475) would be covered. Among tenants, average rent payments of \$7,531 could be almost totally offset, or many renters could choose to own their home. Home renovations would be more affordable and more widespread – those who renovate sometime during the year spend an average of \$4,659. Ontarians could double their current recreation spending (\$3,240 is the current average). Many more could choose instead to make significant increases to RRSP contributions from today’s level of \$3,474.⁴ Further, the provincial and federal governments would also

benefit, collecting approximately \$17 billion more annually, from Ontario taxpayers, without raising tax rates. This additional tax revenue would enable the two levels of government to address funding issues in health care, education, and social services more adequately than they can today.

Increasing productivity is the key to closing the prosperity gap

Using a framework set out in previous work, we have disaggregated the prosperity gap into four measurable elements (Exhibit 4) of GDP per capita:

- The **demographic profile** in a jurisdiction – the percentage of the population that is of working age and can therefore contribute to economic prosperity
- The **utilization** of the working age population – the percentage of the working age population who are seeking and succeeding in finding work

- The **intensity** of work – the number of hours workers on average spend on the job
- The **productivity** of the workforce – the success in translating working hours into products and services of value to customers in Ontario and around the world.

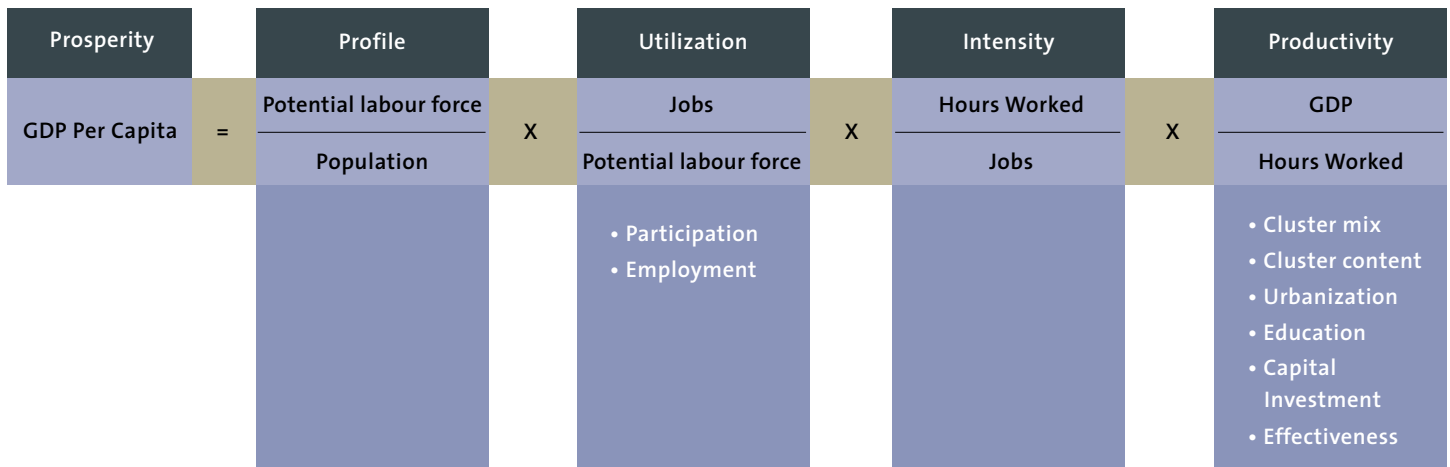
The primary source of the prosperity gap in 2001 is lagging productivity (Exhibit 5). We discuss in turn the impact of each element on the prosperity gap.

To see how each element of the prosperity gap has changed since 2000, see *How the Prosperity Gap changed from 2000 to 2001*.

Profile, Utilization, and Intensity have a limited impact on the prosperity gap

Consistent with the analysis in last year’s Annual Report, our economy is strengthened relative to that of our peer group by a slightly higher proportion of our population

Exhibit 4 Task Force assessed elements of GDP per capita



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

⁴ Statistics Canada, “Spending Patterns in Canada 2000,” Catalogue no 62-202-XIE; mortgages and rent adjusted to reflect Ontario costs.

who are of working age (66.9 percent of Ontario’s population is between ages 16 and 64 compared to 65.8 percent in the peer group). Ontario’s demographic profile generates a \$615 per capita advantage relative to median performance.

Utilization of the working age population is a slight disadvantage for Ontario. Ontario has nearly the same percentage of its working-aged population seeking work (67.9 percent) compared to its peers. This equated to a \$13 per capita prosperity advantage for Ontario. However, Ontario’s economy continues to be slightly less capable of creating jobs for its residents seeking work (a 93.8 percent employment rate versus 95.2 percent in the peer group in 2001). This under performance in employment accounts for \$548 of the prosperity gap. The net effect of these two results is under

performance of \$535 in GDP per capita – roughly one eighth, or about 13 percent, of the overall prosperity gap.

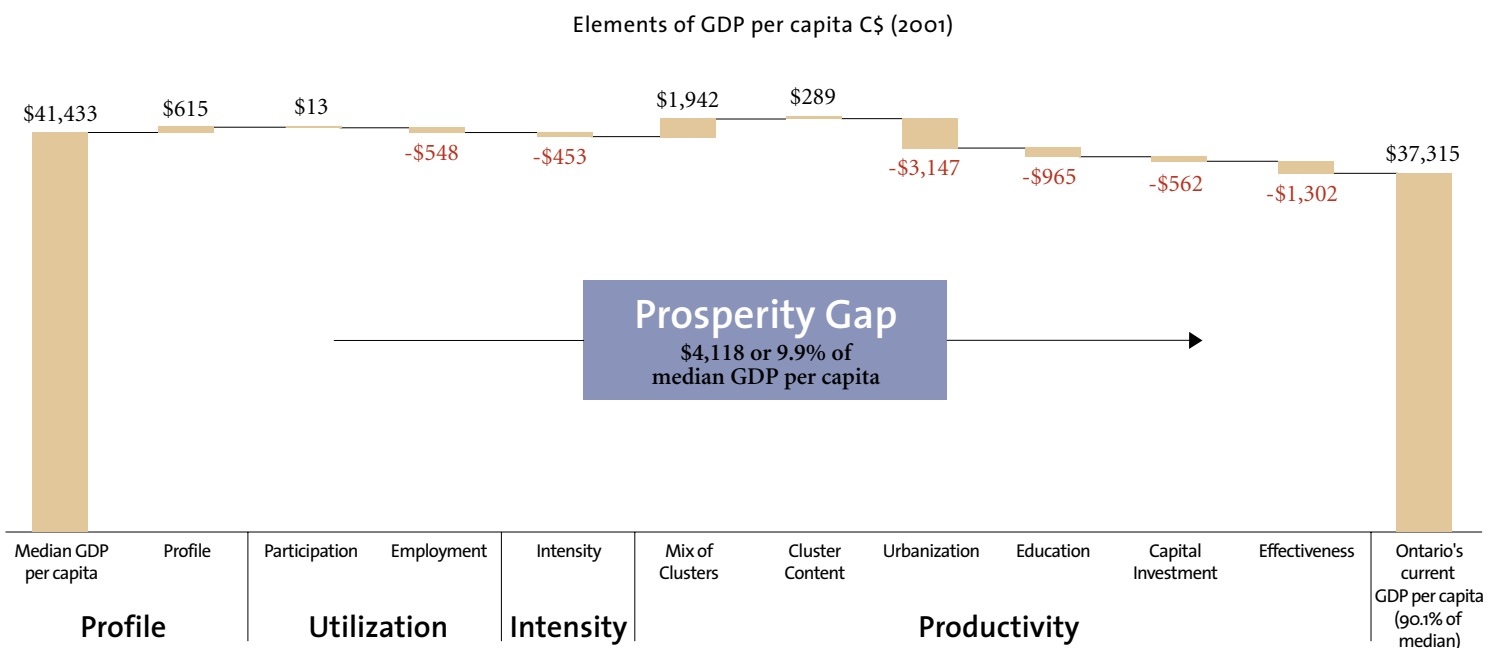
For most of the last twenty years, official statistics report that Canadians have worked fewer hours than Americans. The **intensity** data we show are an estimate based on national-level data, as data are not available at the state level. If the Canada-US intensity difference (33.8 hours worked per week in Canada versus 34.2 hours in the US) is representative of the Ontario-peer state difference, we can attribute \$453 per capita of the prosperity gap to this factor.

Taken together, profile, utilization, and intensity account for less than 10 percent of the prosperity gap. They continue to represent limited potential for closing the prosperity gap.

Productivity remains the key driver of the prosperity gap

In the First Annual Report, we identified higher productivity as the key to closing the prosperity gap. We analyzed three sub-elements to productivity – the mix of Ontario’s clusters, our degree of urbanization, and the overall effectiveness of our efforts. Since last year, we have continued our investigations into the sub-elements of productivity. In this Second Annual Report, we assess three additional factors: the content of our clusters of traded industries, the quality of our human capital as represented by educational attainment of our population, and the quantity of our physical capital as represented by our investment in innovation- and productivity-enhancing machinery and equipment.

Exhibit 5 Productivity still accounts for most of Ontario’s prosperity gap



Note: median of 16 peer jurisdictions
 Source: Statistics Canada; US Department of Commerce – Bureau of Economic Analysis; Institute for Competitiveness & Prosperity analysis

Cluster mix and cluster content in Ontario contribute positively to our productivity. In previous work, we identified the importance of clusters of traded industries to an economy's productivity, innovation, and standard of living.⁵ More recent research with Michael Porter and the Harvard-based Institute for Strategy and Competitiveness shows a consistently positive contribution of clusters to Ontario's productivity. Ontario's strength in automotive, business services, financial services, and metal manufacturing, for instance, has created an attractive mix of clusters of traded industries. Our analysis of Ontario's cluster mix estimates a \$1,942 per capita advantage over the peer median. This benefit is derived from higher output than would be likely if Ontario's mix were the same as that of our peer group.

As discussed in the Institute's Working Paper 1,⁶ Porter's Cluster Mapping project also identified sub-clusters that make up each cluster of traded industries. As with clusters, there are wages and productivity differences between sub-clusters. One of the issues being discussed by business analysts and economists is "hollowing out." Some observers believe that Ontario is losing the high value-added component of its industries, as head offices and decision-makers relocate outside Canada. As we analyze the sub-clusters that make up our clusters of traded industries and compare these with the mix in our peer states, we conclude that cluster content represents a small advantage for Ontario – worth about \$289 per capita in productivity and GDP.

Relatively low urbanization is a significant contributor to the prosperity gap. As we established in previous work, the increased social and economic interaction of people and firms, the cost advantages of larger-scale

markets, and a diversified pool of skilled labour improves productivity in urban areas.⁷ The interplay of these factors promotes innovation and growth in an economy. Ontario's lower degree of urbanization hurts our productivity compared to our peer group.

Our analysis this year indicates that we still have a \$3,147 per capita disadvantage against the peer median, in line with the \$3,210 detailed in the First Annual Report. This makes low urbanization the largest negative contributor to Ontario's productivity gap. The Institute explored this disadvantage in Working Paper 3, *Missing opportunities: Ontario's urban prosperity gap*, this year and will analyze it further in 2004.

Lower educational achievement weakens our productivity. Most economists agree that the level of education attained across the workforce is an important determinant of the "quality" of an economy's human capital. David Laidler summarizes the relationship succinctly: "To the extent that a more educated and better trained labour force is able to produce more output because it embodies more human capital, the proportion of the economy's labour force that has received higher education affects the level of the economy's productivity as measured by output per person-hour of work."⁸ Our updates to the data published in the First Annual Report reinforce the positive correlation between productivity and wages. Economic studies also show repeatedly that individuals' earnings increase with their level of education.⁹ In fact, the best single predictor of personal income is level of educational attainment.

Ontario's under performance in education, mainly at post-secondary levels translates into a negative impact on GDP per capita of \$965 per capita.

Capital under investment is a drag on productivity growth. In the First Annual Report, we identified under investment in machinery and equipment in Ontario compared to levels in US peer states as an issue. This under investment slowly erodes the relative strength – levels and renewals – of our capital stock compared to that in our peer group. This erosion in turn reduces the productivity of our labour and hence Ontario's prosperity. We estimate this under investment to be worth \$562 in lost productivity and prosperity. We discuss further this under investment and its possible causes including higher tax burden on capital below.

The effectiveness residual is diminishing. Our analysis has accounted for the limited impact of profile, utilization, and intensity on the prosperity gap, and reinforced the importance of productivity. As a result, the effectiveness residual, which was perplexing, is being explained away. Its value is estimated at \$1302, a negative impact on prosperity.

Productivity gains count

Productivity gains count not only because they would reduce the largest portion of the prosperity gap; looking at the road ahead, productivity increases would also provide the greatest leverage for a higher, sustainable GDP per capita. Productivity is the only element that can improve in the short-run and grow indefinitely. This can be achieved if our attitudes towards competitiveness, our investments, our motivations to work and hire, and our market and institutional structures rally together to lead to the innovation and upgrading that will raise our productivity to peer group levels and eliminate the prosperity gap.

This past year, The Task Force has continued its search for explanations of the prosperity

⁵ Institute for Competitiveness & Prosperity, *A View of Ontario: Ontario's Clusters of Innovation*, April 2002, pp18-20, 26-27

⁶ *Ibid.*, pp. 18-20

⁷ Institute for Competitiveness & Prosperity, *Missing Opportunities: Ontario's urban prosperity gap*, June 2003.

⁸ Laidler, D. (ed.) (2002). *Renovating the Ivory Tower: Canadian Universities and the Knowledge Economy*. C.D. Howe Institute Policy Study No.27

⁹ See Vaillancourt and Bourdeau-Primeau in Laidler (2000) for a literature review of the rates of returns to education and results of their recent calculations.

gap and for ways to close it. Following the research agenda set out in our First Annual Report, we looked at Ontarians' attitudes to competitiveness and entrepreneurship. We deepened our understanding of consumption-investment trade offs, urban productivity issues and considered how market and governance structures affect our productivity.

Our main conclusion in this Second Annual Report is that Ontarians are not investing enough of today's wealth for tomorrow's prosperity. To close the prosperity gap with our peer states, we need to reverse the widening pattern of under investment that limits our potential for productivity gains.

Throughout this report, we elaborate on this key theme and our insights into steps Ontarians can take to continue to raise our competitiveness among our peers and other players in the global economy.

How the Prosperity Gap changed from 2000 to 2001

Overall the prosperity gap has moved from \$5,905 in 2000 as reported in the First Annual Report to \$4,118 in 2001 as reported here in the Second Annual Report. The first factor in the change is the revisions to official GDP and population statistics by Canadian and US agencies. This results in a reduction of \$939, as most of the US states GDP per capita numbers for 2000 were revised downwards. Second, given the different (2001/2000) inflation rates, the peer group median increased by \$1,020 (2.4 percent), while Ontario's increased by \$374 (1.0 percent) – the inflation effect increased the gap by \$646. So, the net effect of revisions and inflation is to decrease the gap by \$293. Finally, the actual performance of Ontario and the peer economies caused the gap to shrink by \$1,494. Thus the gap decreased by \$1,787.

Elements of the prosperity gap, 2000 and 2001

	First Annual Report 2000 C\$	Second Annual Report 2001 C\$	Difference
Profile	974	615	359
Utilization			
Participation	125	13	112
Employment	863	548	315
Intensity	405	453	48
Productivity			
Cluster Mix	998	1,942	994
Cluster Content	*	289	289
Urbanization	3,210	3,147	63
Education	*	965	965
Capital Investment	*	562	562
Effectiveness	3,524	1,302	2,222
Prosperity Gap	5,905	4,118	1,787

* elements developed for Second Annual Report

For profile, utilization, and intensity the changes are a combination of revisions to 2000 data, and actual performance changes in 2001 discussed elsewhere in the report.

Within the productivity factor, the gap between wages in traded clusters and the rest of the economy widened, based on our analysis of data from the Harvard-based Institute for Strategy and Competitiveness. Ontario has a higher percentage of its employment in traded clusters than the peer group, resulting in a larger cluster mix advantage for our economy. In this year's report, we have assessed our traded clusters content of sub-clusters. This looks at the industry components of each cluster to determine whether or not Ontario's clusters have a mix of high wage or low wage sub-clusters. Our analysis indicates a slight weighting towards higher wage sub-clusters, but this is a very small advantage for Ontario's prosperity – about \$289 per capita in 2001.

Ontario's lower degree of urbanization continues to be a significant productivity weakness.

We have made estimates for two factors that drive productivity – educational attainment and capital investment. For educational attainment we calculate the difference in incomes that Ontarians (and hence the impact on productivity and GDP per capita) would achieve if they had the same level of education as attained in our peer group. For capital investment we estimate the impact on Ontario's GDP per capita of our under investment in the important machinery and equipment component since 1981. Both estimates are discussed further in this report.

Finally the effectiveness residual shrinks partly because we identified other factors and partly because the overall prosperity gap has declined.

Ontario under invests for
tomorrow's prosperity →





Ontario under invests for tomorrow’s prosperity

Ontario’s under investment permeates our economy

As we discussed in the First Annual Report, Ontario’s capacity for innovation and upgrading is built on an integrated set of four factors (Exhibit 1):

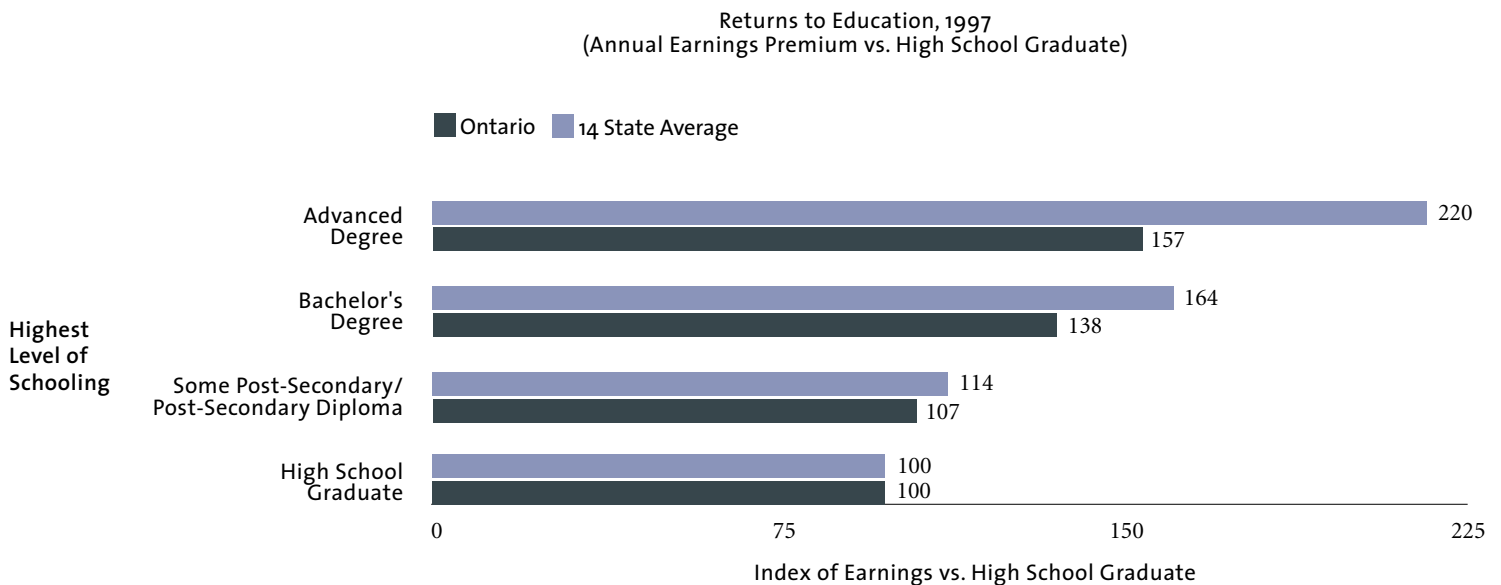
- **Attitudes** towards competitiveness, growth, and global excellence
- **Investments** in education, machinery, research and development, and commercialization
- **Motivations** for hiring, working, and upgrading as a result of tax policies and government policies and programs
- **Structures** of markets and institutions that encourage and assist upgrading and innovation

As we review our research findings to date, we see that investments are the key driver of our prosperity gap.

A competitive rate of investment in human capital and physical capital strengthens our capability for innovation and productivity enhancement. But there is a 10 percent prosperity shortfall between us and our peers, because Ontarians invest less.

Initially, we invest in much the same way as our peer group. But then we stop investing for the long term and instead increase our current consumption, while our peer jurisdictions keep right on investing. In fact, we do all the basics – and do them well. But, as the investment requirements become higher and more demanding, we tend not to invest. The net result is that, in the balance between

Exhibit 6 Higher education leads to higher economic returns



Source: Institute for Competitiveness & Prosperity based on Baker and Trefler, “The Impact of Education & Urbanization on Productivity,” www.competeprosper.ca

investment and consumption, Ontario spending is weighted more toward consumption than that in the peer states, which invest a higher percentage of their total spending than Ontario. This is true for Ontario citizens, Ontario businesses, and the Ontario government.

Relative to our peer group

- We under invest in **education** as students move through the system
- We under invest in **machinery & equipment** – public and private – and in structures that would support productivity gains
- Our **governments** have under invested in future prosperity, by shifting spending away from areas that support long-term investment to those directed towards current consumption
- We attract highly skilled **immigrants** but under invest in ways to maximize their contribution to Ontario's prosperity once they are here
- We under invest in our **cities**.

If Ontarians do not break out of this pattern and continue to be out invested by our peer group, we run the risk of falling further and further behind– to the point where we cannot catch up and be competitive

Investment in education lags peers

Investment in education affects productivity and prosperity throughout our society. Most researchers who have analyzed Canada's and Ontario's productivity challenge conclude that education is an important part of the solution. A more educated and better trained labour force creates more value. Studies show repeatedly that individuals' earnings increase with the level of education. In fact, the best single predictor of personal income is level of education. The best advice parents can give their children is to stay in school. Every extra year of school and each additional degree raise income prospects for individuals (Exhibit 6).

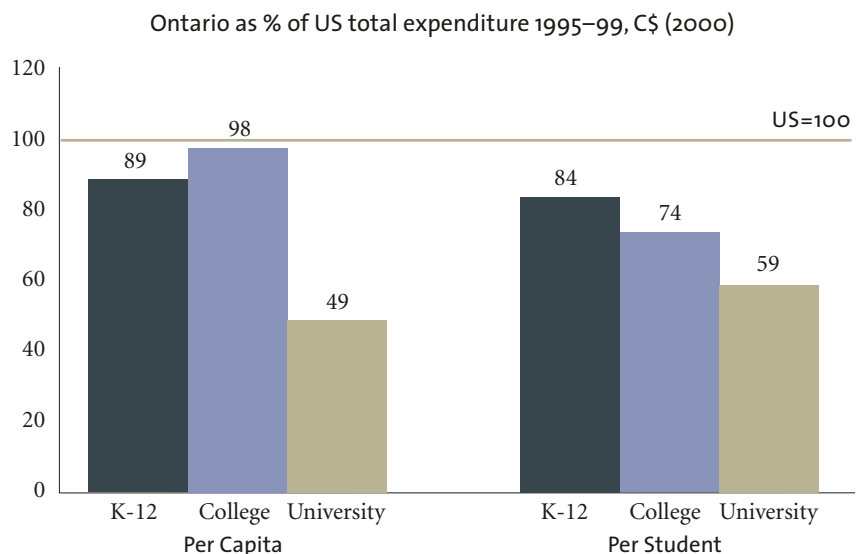
While the economic returns from each level of education are higher in the US than in Ontario, the data indicate a significant increase in earnings from advanced education in the province.

For businesses, the increased availability of skilled workers, researchers, and managers is a critical benefit of post-secondary education. For all of us, the ideas that spill out of universities improve and create products, services, and processes and lead to new companies and whole new industries.

Our review of Ontario's investment in education shows that we under invest relative to our peer group and that this under investment is more pronounced as we move through the educational system. Our analysis

includes funding from all public and private sources, except as noted. On a per capita basis, Ontarians invest competitively with the peer group in primary and secondary schools (89 percent of US rates) and in colleges (98 percent). But university spending is at a much lower rate – 49 percent of US spending per capita. On a per student basis, the spending disparities widen in primary and secondary schools (84 percent of US rates) and colleges (74 percent), since Ontario has proportionately more of its population enrolled as students in these levels. In effect, higher per capita investments do not go as far as the level of spending per student. At the university level, because of our lower participation rate, the spending on a per student basis narrows but is still only 59 percent of the US rate (Exhibit 7).

Exhibit 7 Ontario's spending lags US at all levels of education



Notes & Sources: Capital and operating expenditures; auxiliary enterprises excluded for college and university for consistency; US data for all US

K-12: Statistics Canada, CANSIM II # 4780014 (expenditure); Education in Canada 2000 (enrolment); National Center for Education Statistics, Digest of Education Statistics 1996–2002, Tables 162–164 (expenditure), Table 37 (enrolment)

College: CAAT data only, Ontario Ministry of Training Colleges & Universities, College Financial Information System (expenditure and enrolment) adjusted to exclude non-diploma training and apprenticeship and international students; US public 2-year institutions, National Center for Education Statistics, Digest of Education Statistics 2002, Tables 330–357 (expenditure), Tables 200–1 (enrolment)

University: Statistics Canada, CANSIM II Table #4780008 (expenditure), Education in Canada 2000 (enrolment); US data for public and private 4-year institutions, National Center for Education Statistics, Digest of Education Statistics Tables 330–357 (expenditure), Table 200-1 (enrolment)

Primary and secondary education investment shows mixed results

In Working Paper 3, the Institute concluded that through the 1990s, while our investments in primary and secondary education remained flat, investments by our peer group grew.¹⁰ As a result, Ontario fell from 6th ranking in per capita spending in 1992-93 to 15th in 1999-2000 – behind all peer states.¹¹

It is difficult to be definitive on whether this investment pattern is worrisome or not. The results achieved by Ontario's primary and secondary school systems are better than those achieved in our peer group of states. As Ontario's rank in investment fell through the mid-1990s, there is no evidence that relative achievement results declined. It is also possible to conclude that the increased education spending in peer group states addressed an obvious weakness – both the overall level and the disparities in student achievement – in their primary and secondary education.

Through the 1990s, Ontario's rank in the percentage of Grade 9 students who ultimately graduate on time has been in the upper half of its peer group and has been improving. In 1992-93, Ontario's public and private secondary school graduation rate was 73 percent. By 1999-2000, the high school graduation rate had risen to 78 percent. Ontario's rank within the peer group of US states rose from eighth in 1992-93 to second in 1999-2000, with only New Jersey having a higher success rate (86 percent).

Ontario students also perform well on standardized tests. Their results are generally on a par with students' scores across the country and exceed those of students in the US (Exhibit 8). In addition, the disparity of results across schools is significantly lower in Ontario than in the United States, indicating our success at providing a better quality education for a broader range of students. The results do point out that there is room for improvement in Ontario given the better results in Alberta and Quebec.

Conversely, while Ontario performs well at graduating students on time, the Task Force is concerned about whether post-secondary students' aspirations are competitive with those of peer states' students, since a smaller percentage of our high school graduates are university bound. Compared to the peer group median, the difference is not large: 28 percent of Ontario Grade 9 students were enrolled in university five years later versus 33 percent for the median of the 14 states.¹² When colleges are also considered, Ontario outperforms the median and most states in the peer group: 50 percent of Ontario compared to 47 percent in the peer group (Exhibit 9).

More significantly, however, in several of the leading peer group states, university enrolments far exceed Ontario's – Massachusetts 47 percent, New Jersey 47 percent, Pennsylvania 41 percent, and New York 35 percent. Given the increased productivity from higher levels of education, this difference is a dramatic barrier to overcome if we are to close the prosperity gap.

Our concern about students' aspirations is highlighted in findings from a recent report by the Canada Millennium Scholarship Foundation¹³ reporting that 50 percent of Canadian students who score in the top 40 percent on standard achievement tests, including PISA, do not attend post-secondary school. These findings reinforce our view that Ontarians need to be more successful in encouraging high school graduates to pursue a post-secondary degree, especially since the study uncovered that it was students' attitudes – and not financial barriers – that dissuaded them from attaining higher levels of education.

Exhibit 8 Ontario outperforms US in student achievement

Country/Province	Reading	Math	Science
International	500	500	500
United States	504	493	499
Ontario	533	524	522
Atlantic	514	510	510
Quebec	536	550	541
Prairies	529	529	525
Alberta	550	547	546
British Columbia	538	534	533
Canada	534	533	529

Note: Blue numbers indicate a statistically significant (95% confidence limit) higher score relative to the corresponding Ontario score. Red indicates a statistically significant lower score.

Source: Institute for Competitiveness & Prosperity based on Measuring Up: The Performance of Canada's youth in reading, mathematics and science – OECD PISA Study – First Results for Canadians aged 15

¹⁰ Institute for Competitiveness & Prosperity, *Missing Opportunities: Ontario's urban prosperity gap*, June 2003.

¹¹ This pattern does not change much when looked at on a per student basis. Recent data on private school spending in US states are not available, but comparisons of Ontario public and private spending to US national results do not differ dramatically from comparisons of public-to-public spending.

¹² four years later for US students.

¹³ Canada Millennium Scholarship Foundation, "Ready or Not? Literacy Skills and Post-Secondary Education," September 2003.

In fact, tuition fees are not a major deterrent to students considering pursuing post-secondary education. A recent Statistics Canada study shows that over the past decade, the post-secondary participation rate gap between the students from low- and high-income families has actually narrowed. Further, when high school graduates were asked the main reason for their decision not to go to go on to college or university in a study by the Canada Millennium Scholarship Foundation, 77 percent of respondents listed a non-financial reason.¹⁴

Post-secondary education investments show important weaknesses

Investments in post-secondary education in Ontario have grown at a moderate rate over the last decade. However, Ontario has lost significant ground relative to investments made in public and private post-secondary institutions in the US.

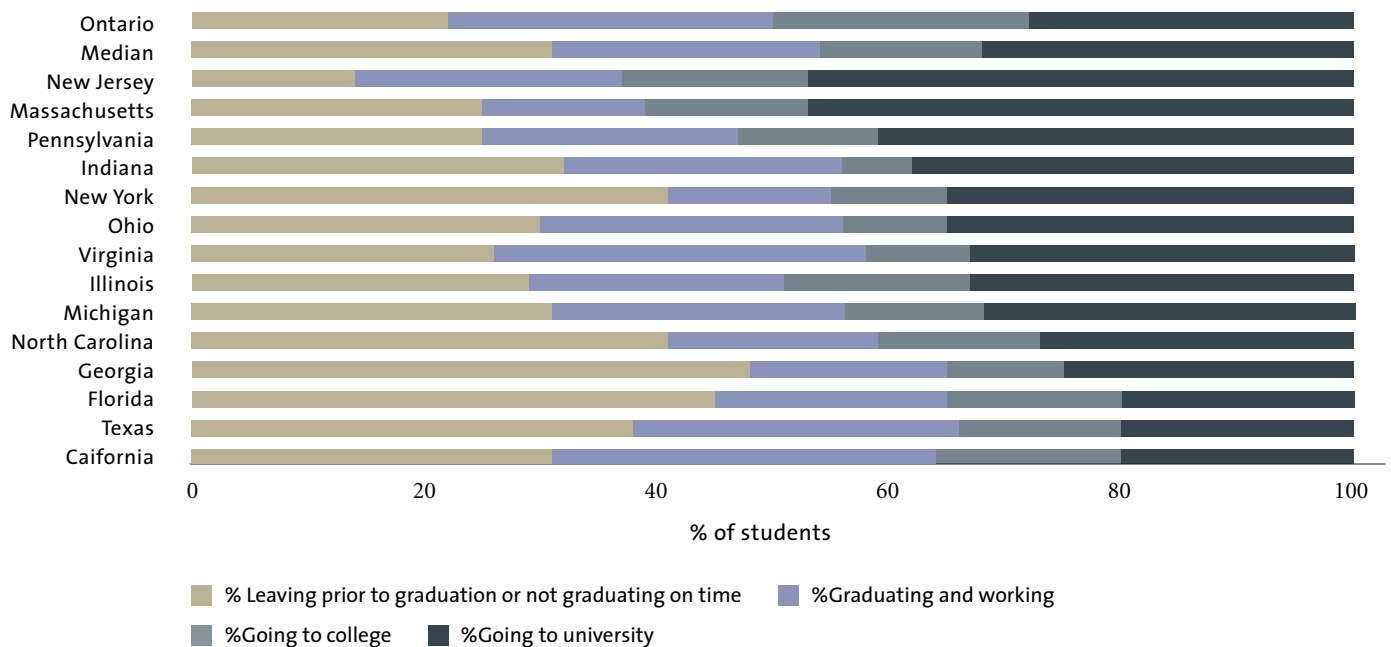
A major difference in the educational strategy of Ontario and its peer group is the diversity of public and private universities and colleges in the US. This diversity creates the opportunity for higher levels of private funding in institutions, which has led to

substantially higher levels of investment on a per student basis as well as a proportion of GDP. While Ontario may be investing at close to competitive levels when only public institutions are considered, our decision to forbid private universities, until recently, has constrained investment in this critical prosperity driver.

At the college level of post-secondary education, the data show that, over the period 1995-99, Ontario invested at about the same rate on a per capita basis, but about 26 percent less on a per student basis.

Exhibit 9 Fewer Ontario students are university bound

Student flow from grade 9 to post-secondary destination (2000)



Source: Statistics Canada – Special Request, OUAC, OCAS, Ministry of Education (12 Grade Enrolment #), Digest of Education Statistics 2001 (table # 205, 206)

¹⁴ Canada Millennium Scholarship Foundation, “Why Don’t They Go On? Factors Affecting the Decisions of Canadian Youth Not to Pursue Post-Secondary Education,” 2001.

At the university level, the difference becomes more pronounced as investment per capita and per student fell dramatically below US levels. Per capita, the US out-invested Ontario by a margin of 2 to 1. On average between 1995 and 1999, the US invested \$875 per capita in universities, while Ontario invested only \$425.¹⁵ This gap narrowed somewhat on a per student basis, because Ontario has fewer people attending university as a percentage of its population. The result is that, over the 1995-99 period, Ontario universities spent a total of \$18,334 per student annually, while US universities spent \$31,227 per student¹⁶ – a yearly difference of \$12,893 per student.

While higher tuition fees account for some of the difference in spending capacity of universities in the US, they are not the only source of additional revenues. Tuition and fees at Ontario universities averaged \$5,268 in 1999 compared to \$10,121 at US universities.¹⁷ The largest sources of additional revenues to US public and private universities are private gifts and donations and endowment income. Private donors invest at a much higher rate in US schools than in Ontario schools. These investments increased capacity to spend at US public schools by \$2,000 per student, and by \$9,366 per student at private schools. Ontario data for donations by private individuals and endowment income are not available, but they are believed to be relatively modest in comparison. On average, endowment assets per full-time equivalent student are \$126 thousand at private universities and \$15 thousand at public universities. The average endowment in Ontario is \$7 thousand.¹⁸ US universities also have access to a wider range of related revenue-generating activities (in hospitals and athletics) than do Ontario's universities.

In sum, the pattern of investing across the spectrum of post-secondary education has resulted in substantially lower investment in post-secondary education by Ontario relative to the US and our peer group. The gap is dramatic – and widening.

Ontario also trails in productivity-enhancing capital investments

Another critical area of investment is the acquisition of new assets or refurbishment of existing ones. This physical capital investment – in machinery and equipment and in non-residential infrastructure – enables workers to be more productive, giving them newer and better tools to do their work. Innovation and upgrading are typically embedded in the machinery and equipment component of investment. Increasingly, it consists of computer hardware and software and telecommunications in investments made by knowledge-intensive companies. It is a key driver of productivity growth.

Examples of machinery and equipment investment include: a company building a new factory assembly line or retooling an existing one, a bakery buying a new oven, or a government agency buying new computers for an airport. As of 2002, 70 percent of all new capital investment in Ontario was in machinery and equipment, up from 59 percent in 1981. Structural investment comprises non-residential infrastructure – including the building of a new factory or a warehouse, and engineering construction investment like highways, railways, and bridges.

According to research conducted by economists De Long and Summers,¹⁹ there is a positive and statistically significant relationship between investment in machinery and

equipment and growth in GDP per worker – our standard measure of productivity. The correlation between productivity and investment “holds over long historical periods, as well as in recent ones, in both developed and developing countries.”²⁰ Infrastructure investment, while adding to productivity, is considered by economists to have less impact than machinery and equipment investment.

Compared to the US national figures,²¹ Ontario under performed in most areas of capital investment (as a percentage of GDP) between 1981 and 2001. During that time, Ontario lagged the US in overall capital investment, except for the short period of 1986-1992 when Ontario held a slight lead (Exhibit 10). Overall capital investment in Ontario stood at 14.7 percent of GDP in 1981, while that in the US was slightly higher at 15.4 percent. Since then, while investment has decreased for both Ontario and the US, Ontario has seen a much greater decline. The result is that on average Ontario under-invested by 6 percent versus the US over the past two decades. This annual investment gap has a strong cumulative effect. Over the twenty year period, if the US rate were matched, Ontario's capital stock would have been almost \$35 billion dollars higher.

Ontario's private sector has consistently under invested compared to US counterparts

The private sector in Ontario accounts for just over 80 percent of all capital investment. Following the overall capital investment results, Ontario's private sector investment dropped from 12.5 percent of GDP in 1981 to 10.8 percent in 2001. During that same period, the US investment rate fell from 13.0 percent to 11.6 percent, widening the

¹⁵ Operating and capital expenditures, excluding ancillary enterprises (e.g., athletics, residences, dining halls – for comparison with Statistics Canada data).

¹⁶ In US public universities (64.7 percent of students) the per student spending is \$28,232 and in private universities (35.3 percent of students) the spending is \$36,461.

Note that results include capital and operating spending, but exclude ancillary expenditures (e.g., residences, dining halls, athletics).

¹⁷ Average tuition at US public universities in 1999-2000 was \$5,732 and at private universities it was \$18,174.

¹⁸ US data, National Association of College & University Business Offices “2002 NACUBO Endowment Study” prepared by TIAA-CREF; Ontario data provided by University of Toronto, Division of University Advancement.

¹⁹ J. Bradford DeLong, Lawrence H. Summers, “Equipment Investment and Economic Growth” 1995, Source: http://www.j-bradford-delong.net/pdf_files/QJE_Equipment.pdf

²⁰ R. Harris, “Determinants of Canadian Productivity Growth: Issues and Prospects”; Discussion Paper # 8; Industry Canada; 1999

²¹ Comparisons directly against the individual US states are not possible as state-level data are unavailable.

gap from 0.5 percentage points in 1981 to 0.8 in 2001. Nearly all this gap is in machinery and equipment, although Ontario's private sector trails the US on structural investments as well. Since 1991, Ontario's private sector has under invested in machinery and equipment by an average of 10 percent annually below US private investors.

Public sector capital investment in Ontario is below US levels

While a smaller part of total investment, public sector capital investment is still an effective driver of growth in an economy. For most of the past two decades, Ontario's public sector out-invested the US public sector, but since 1996 it has fallen behind.²²

For machinery and equipment, governments in Ontario invested slightly more than those in the US between 1981 and 1996. In 1981, Ontario's public sector investment stood at 0.6 percent of GDP, while in the US it was

0.5 percent. In 1996, the US caught up to Ontario, with both having an investment rate of 0.8 percent of GDP. Since then, while Ontario's investment rate has remained flat at 0.8 percent of GDP in 2001, the US rate has increased to 0.9 percent or about 10 percent more.

Public sector structural investment in Ontario has consistently lagged slightly behind that in the US and, since 1995, we have seen the US spend about 25 percent more on a per dollar-of-GDP basis. As of 2001, Ontario's public sector invested 1.5 percent of its GDP on structural capital, while the comparable US investment was slightly above 1.8 percent.

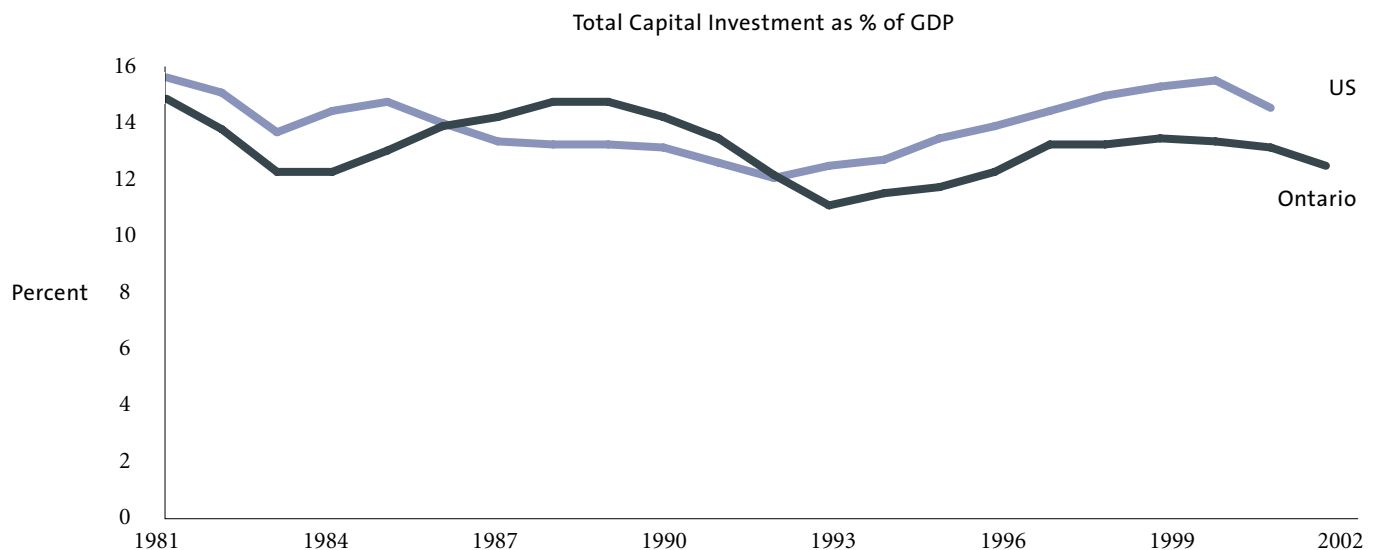
Under investment is costly

We estimate that under investment in physical capital costs Ontarians \$562 in lost GDP per capita at a minimum. GDP growth is driven by growth in labour hours (which are

driven by profile, utilization, and intensity) and growth in productivity. One of the key factors driving productivity is the amount invested in machinery and equipment. If Ontario's private sector had kept pace with the US machinery and equipment investment since 1981 our total investment would now be 4.7 percent higher. We estimate that this higher level of investment would have raised productivity and prosperity by \$562 per capita. This is a conservative estimate, as it focuses only on our private sector under investment in machinery and equipment – the component that research has identified as the most critical for productivity growth. Using the same analysis for all public and private capital investments, GDP would be \$892 per capita higher.

The impact of our lower capital investment rate could be much higher. The approach just described looks only at private sector under investment in machinery and equipment

Exhibit 10 Ontario's capital investment has trailed the US in the last decade



Source: Statistics Canada; most recent US Department of Commerce and Bureau of Economic Analysis data; Institute for Competitiveness & Prosperity Analysis

²² US military expenditures are excluded from public sector investments.

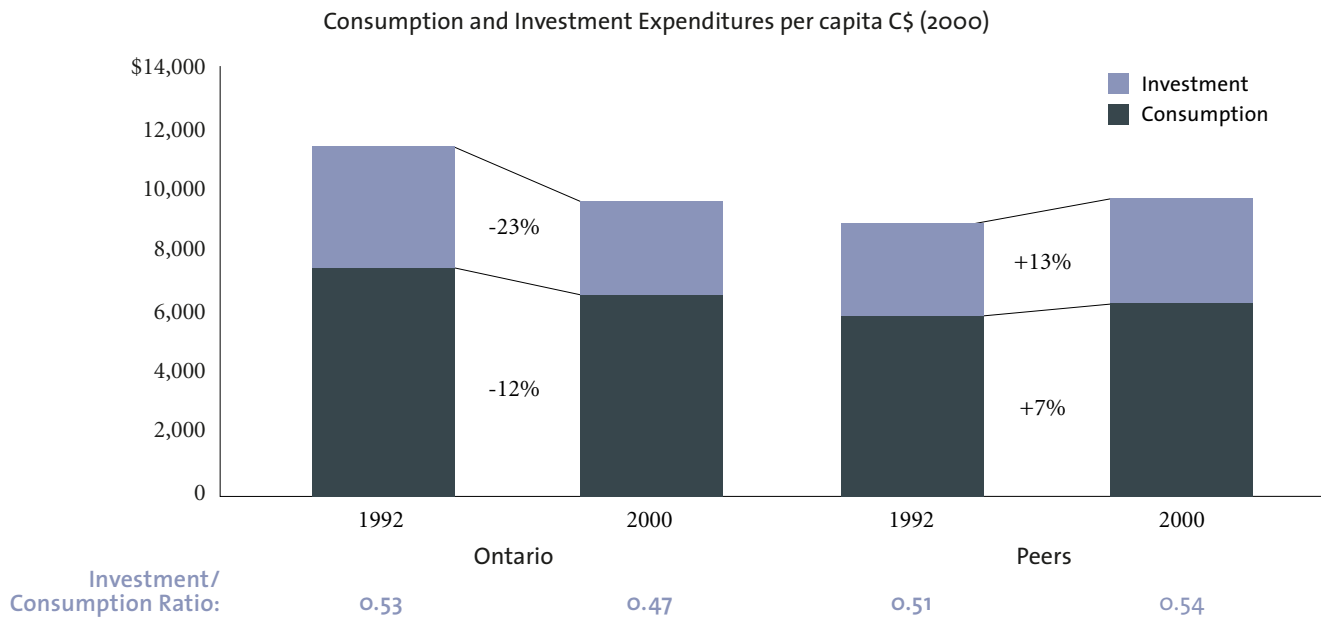
since 1981 because of limitations in access to reliable comparative data. Another approach is to look at the overall level of capital invested per labour hour versus the US and to estimate growth in GDP per capita if we were to match US results.

As a percentage of GDP, our net capital stock levels were about 14 percent lower than the US levels in 2001.²³ Using a method developed by Andrew Sharpe²⁴ at the Centre for the Study of Living Standards, we estimate that if we invested at the same level per labour hour as the US, the labour productivity gap would decrease by 29 percent based on 2001 data, translating to an increase of \$1,195 in GDP per person.

Why is Ontario’s capital investment lower?
A 2002 study published in the International Productivity Monitor²⁵ offers two possible reasons for Canada’s similar poor performance in manufacturing investment: the lower cost of labour, and the higher cost of importing equipment versus the US. The study found that, between 1994 and 2000, the cost of labour relative to capital increased by 1.7 per cent per year in Canada compared with 4.6 per cent in the US. At the same time, the Canadian dollar depreciated significantly, increasing the price of imported equipment. This gave Canadian firms less incentive to increase their capital investment compared to their American counterparts, and made the cost of investment higher. We also discuss later the added de-motivating impact of Ontario’s higher tax burden on capital.

Spending by governments in Ontario has shifted from investment to consumption over the last decade
Government expenditure is a critical contributor to upgrading and innovation. We recognize that governments also have an important role in consumption expenditures that help secure an adequate quality of life for all Ontarians. We think it important, however, that governments achieve an appropriate balance between consuming current prosperity and investing for future prosperity. We do not prescribe the exact balance between the two – but our research indicates that relative to our peer group of US states, governments in Ontario have shifted away from investment expenditures towards consumption.

Exhibit 11 Governments in Ontario have shifted spending from investment to consumption



Source: Institute for Competitiveness & Prosperity based on data from Statistics Canada, Public Sector Statistics 2000–2001 (table 2.2); US Census Bureau, Statistical Abstract of the United States: 2001, 121st edition (table 463); Institute for Competitiveness & Prosperity analysis

²³ Excluding military capital stock.

²⁴ Andrew Sharpe, “Why are Americans More Productive Than Canadians?” 2003, Centre for the Study of Living Standards (CSLS).

²⁵ J. Bernstein, R. Harris, A. Sharpe, “Explaining the Widening Canada-US Productivity Gap in Manufacturing,” International Productivity Monitor #5, 2002.

Governments at all levels in Ontario and the peer states direct approximately 30 percent of their total spending to a combination of debt service, basic government administration, environment, and protection. In allocating the remaining 70 per cent, a trade off between consumption and investment occurs. To compare trends in how governments in Ontario and the peer states made this trade off, we classified government expenditure by consumption (e.g., health care and social services) and investment (e.g., education, transportations, communication, and housing).

In 1992, our governments in Ontario spent 53 cents on investment for every dollar of consumption spending similar to the experience in the peer states at 51 cents for every dollar of consumption spending (Exhibit 11). By 2000, this ratio dropped to 47 cents in Ontario, while it rose to 54 cents in the peer states. On a per capita basis, since 1992, governments in both Ontario and the peer states have sustained relatively the same level of consumption expenditure. However, governments in Ontario reduced public investment expenditure, while the peer states governments chose to increase per capita investment spending.

Our research indicates that after the last public investment dollar was spent in 2000, our U.S. counterparts had \$3.8 billion (using spending in Ontario as a base) or \$500 per capita more to spend on improving productivity. This is in stark contrast to 1992, where we invested \$6.1 billion more than the peer governments.

Through the 1990s, government spending as a percentage of GDP declined in Ontario and the peer states. In Ontario, government spending fell from 50.9 percent of GDP to 36.5 percent in 2000, while in peer states the

decline was from 37.6 percent to 32.5 percent. On a per capita basis, the US peers actually increased spending by governments, while in Ontario per capita spending fell 13.5 percent over the 1992-2000 period. Higher prosperity in the peer states allowed their governments to have lower tax rates than Ontario and still spend more per capita. In Massachusetts, the most prosperous state in the peer group, total per capita spending increased from \$14,476 in 1992 to \$15,041 in 2000 (constant 2000 Canadian dollars). For Ontario per capita spending fell from \$15,730 in 1992 to \$13,624 in 2000. Consumption expenditures in Massachusetts increased by 2.5 percent over the period, while in Ontario they fell 12 percent. Investment in Massachusetts grew fully 31 percent while in Ontario it shrunk 23 percent.

To make progress in raising our productivity, Ontario will have to address this under investment.

Under investment in immigrant integration limits our competitive advantage

Canada has a competitive advantage over its peers – the arrival of more and more highly skilled immigrants. Statistics Canada data indicate that over 60 percent of recent immigrants are trained as professionals or in skilled trades, admitted to Canada in large part for their levels of educational attainment and skills. This is a result of Canada's competitive immigration strategy.

Results from the 2001 census indicate the growing importance of immigration to our population. Overall, 26.8 percent of Ontario's residents were born outside Canada. A third of residents within metro areas are immigrants (in the Toronto Census Metropolitan Area, 43.4 percent). According to Human Resource Development Canada,²⁶

fully 71 percent of our labour force growth in Canada growth was from immigration in the period 1991 to 1996, with immigrants expected to contribute 100 percent of labour force growth by 2011. More than half – 55 percent – of all new immigrants choose to reside in Ontario, mainly in our cities. Research conducted by Richard Florida and Meric Gertler,²⁷ found two key features of Ontario's cities – the relatively high proportion of immigrants and the relatively low proportion of university degree holders. Ironically, we are not capitalizing on the strength in immigration to overcome the talent deficit they identified.

Immigration raises our educational attainment levels (Exhibit 12). A higher percentage of immigrants than Canadian-born have post-secondary education. The latest Statistics Canada data reveal that in 2000, 41 percent of recent immigrants in the workforce held a university degree compared to only 20 percent of native-born Canadians. In contrast, immigration to the US brings down their educational achievement average.

Educated immigrants to Canada counteract the “brain drain” of Canadian educated talent to the United States by a margin of four to one. Yet, Ontarians are missing out on this potential “brain gain” opportunity as many immigrants have difficulty entering the professions and careers they once held. According to data from Status of Women Canada, just over half of foreign-trained professionals are working in professions or trades three years after immigrating. A 1996 study concluded that in Toronto “immigrants settle for jobs in the accommodation, food and beverage sector because entry costs are low, skill requirements are minimal, and other job opportunities are not available to them.”²⁸

²⁶ Denton, Feaver, and Spencer, Immigration Labour Force and the Age Structure, Human Resources Development Canada, 1999

²⁷ Their report, Competing on Creativity, can be found on the Institute's Web site www.competeprosper.ca

²⁸ CERIS-Toronto & Metropolis, Immigrants' Economic Status in Toronto: Rethinking Settlement and Integration Strategies, 2002.

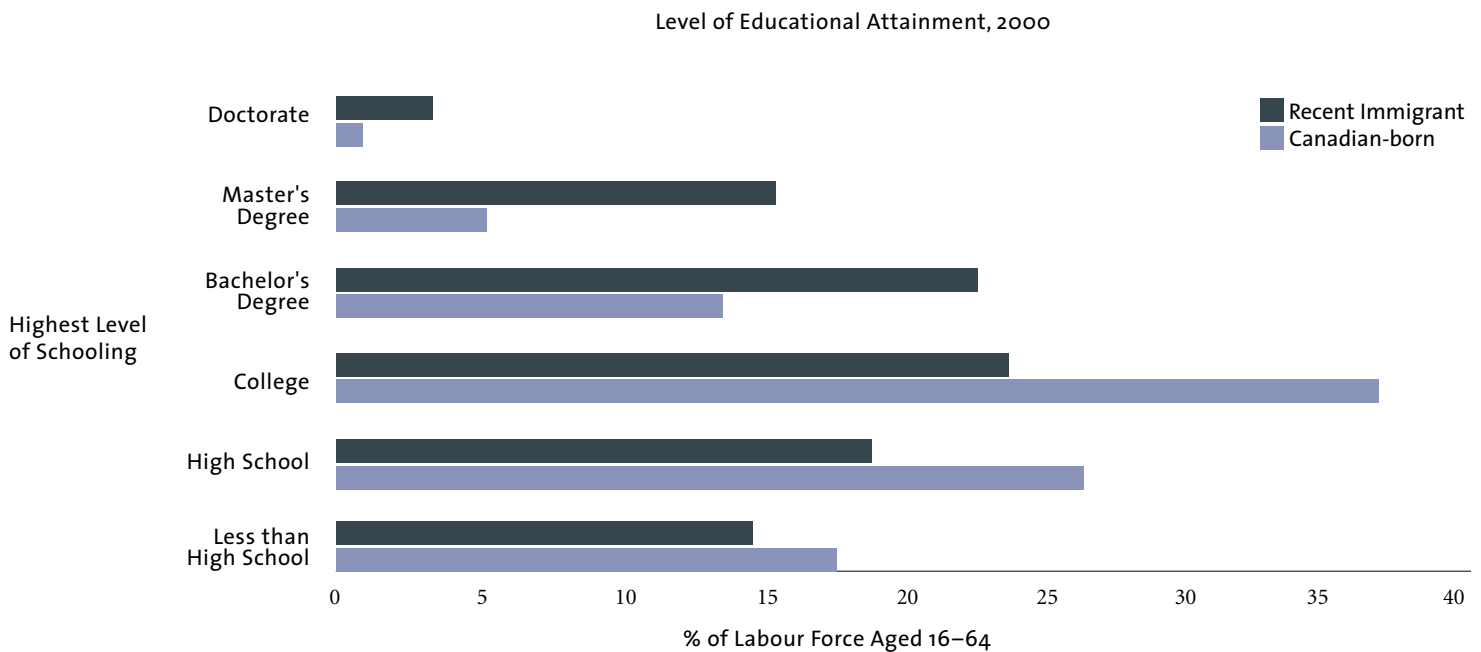
More recent information indicates this pattern has not improved. Based on 2001 census data, the earnings of recent immigrants relative to those of the Canadian-born have deteriorated sharply. In 2000, the ratio of employment earnings of immigrants one year after landing and Canadian born workers stood at 61.8 percent. For immigrants who had been here ten years the ratio was 83.5 percent.²⁹ These results have fallen significantly, compared to the progress of earlier immigrant cohorts in the 1980s and early 1990s who gained closer parity more quickly. They tell us that immigrants are now taking longer to integrate into the Canadian economy. Other work by Human Resource Development Canada and Statistics Canada indicates this gap exists mainly among uni-

versity-educated immigrants.³⁰ Overall, this earnings gap points to a productivity gap between immigrants and native-born Canadians that needs to be closed.

One difficulty in capturing the full potential of immigrants is that employers and accrediting bodies are often unable to assess prior learning effectively. Consequently, immigrants often find that their educational credentials are under valued or not recognized at all. Accreditation can be a lengthy and costly process, too often resulting in immigrants having to re-study their trained profession. Instead, to support themselves and their families, many take jobs for which they are over-qualified; the immigrant doctor or engineer taxi driver is increasingly commonplace.

One result is that we are forgoing opportunities to enjoy the true economic value of immigration. For example, The Maytree Foundation has pointed out the high investment already made in other countries to train physicians – seven years’ post-secondary education and two years’ training in hospitals – can save well over \$100,000 for the provincial treasury. They argue that a key barrier to realizing this economic potential is the overly strict credential standards imposed by provincial licensing bodies. And in a 2001 study³¹ on the impact of non-recognition on the Canadian economy, The Conference Board of Canada argued that, if the problem were eliminated for immigrants and others, overall Canadian income would be between \$4.1 and \$5.9 billion higher. This

Exhibit 12 Immigration increases educational achievement in Ontario’s workforce



Note: Recent immigrants arrived in the previous five years and the sample consists of individuals aged 16–64, who worked at least 40 weeks and with positive earnings
Source: Statistics Canada, "Will they ever converge? Earnings of immigrant and Canadian-born workers over the last two decades," 2003.

²⁹ 2001 Census: analysis series – Earnings of Canadians: Making a living in the new economy
³⁰ Immigrant Occupational Skill Outcomes and the Role of Region-of-Origin-Specific Human Capital, Human Resources Development Canada; Earnings of Canadians: Making a living in the new economy, Statistics Canada, 2001
³¹ Brain Gain, The Economic Benefits of Recognizing Learning and Learning Credentials in Canada, Michael Bloom & Michael Grant, The Conference Board of Canada, 2001

improvement would be the result of lowering unemployment and underemployment as we add between 33,000 and 83,000 post-secondary credential holders to the ranks of Canada's skilled workers. This earnings gap represents a missed economic opportunity for all of Canada, as well as increased social costs from higher incidences of poverty and greater dependence on social services.

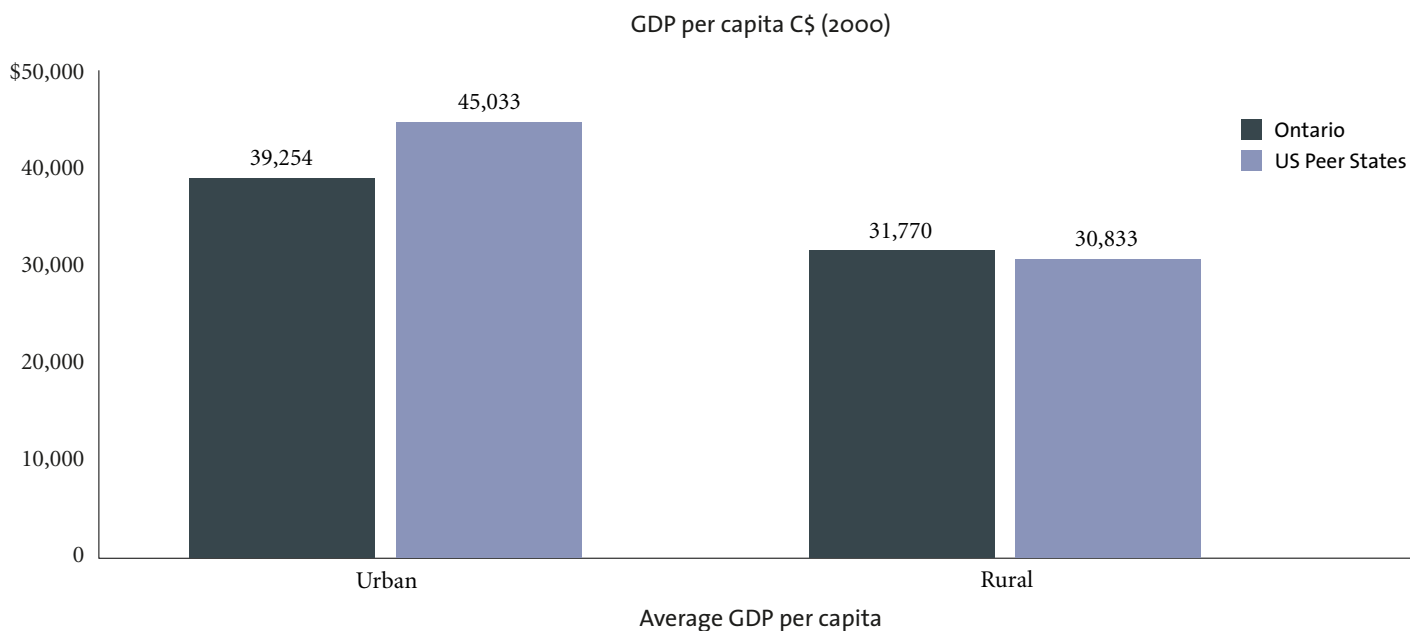
But we are beginning to see success stories. The Ontario Ministry of Training Colleges and Universities, through the Access to Professions and Trades Unit, is committed to helping skilled newcomers reach their full potential in the provincial economy without duplicating education and experience gained outside Ontario. Bridging programs are part

of this. For example, The University of Toronto's Faculty of Pharmacy, with provincial funding, has implemented its International Pharmacy Graduate (IPG) Program as a means of assisting foreign-trained pharmacists to meet Canadian standards of practice in a timely manner. The major challenges that they have observed – and acted on in their program design – are the cultural norms around patient interaction and the regulatory requirements governing the practice of pharmacy in Canada. In general, there are few problems with the scientific knowledge of these individuals; learning how to apply this knowledge in the Canadian health care context is the main challenge. The program appears to be successful in efficiently building on the solid

base of skills already gained by participants outside Canada and supplying skilled pharmacists. This is of particular importance given the current and projected shortage of pharmacists throughout Canada and the United States.

Creating Access to Regulated Employment for Nurses (CARE) is another pilot bridging project funded by the Ontario government to assist internationally trained nurses gain access to the profession in Ontario. In addition, this pilot is to develop a bridging model that could be transposed into other disciplines facing a similar set of circumstances and develop an outlet for prior learning assessment. Before the launch of this program, the licensing exam pass rate

Exhibit 13 Ontario's prosperity gap is located in its urban areas



Source: Statistics Canada, Income Trends in Canada 1980–2000; US Department of Commerce, Bureau of Economic Analysis, Regional Accounts Data; OECD PPP Indices; Institute for Competitiveness & Prosperity analysis

for international nurses stood at 33 percent; the pass rate for individuals participating in CARE is 74 percent. Although this program faces challenges adjusting to the regulatory requirement changes in 2005, to date, it has succeeded in aiding participants to return to their profession and in raising awareness of innovative programs for overcoming skill shortages in Ontario. The strengths of this project lie in the fact that strong partnerships between stakeholders have been forged to create effective working groups – a sustainable model for other disciplines.

Ontario must continue to develop more programs like these to close skill gaps. Other programs such as Career Bridge, an initiative sponsored by the Ontario Ministry of Training Colleges and Universities in coordination with the Toronto City Summit Alliance and the Toronto Region Immigrant Employment Council are designed to enable immigrants to gain Canadian work experience in order to close the productivity gap. This is increasingly important given that numerous studies have shown that the first job immigrants hold after immigrating can trap them in positions of under employment.

Under performance in our city regions is a major part of the prosperity gap

In our First Annual Report, we identified the importance of urbanization to productivity. Low urbanization, through its negative impact on productivity, accounts for a significant part of the productivity gap.

Three factors interact to increase productivity in urban areas: network effects that drive innovation, larger scale that reduces unit costs, and thick labour markets that benefit workers and firms. Because of this strong relationship, the Institute investigated urban prosperity further³² and confirmed the continuing importance of urbanization to the prosperity gap.

Our most surprising finding is that Ontario's prosperity gap is in our city regions, not our rural areas. Ontario's urban GDP per capita stood at \$39,254 in 2000 versus \$45,033 in the peer group creating a prosperity gap in our cities of \$5,779 in GDP per capita, or 12.8 percent below the average of the peer states (Exhibit 13).

The Institute's research is consistent with findings from research completed by Richard Florida and Meric Gertler.³³ They found, on the one hand, that Ontario's cities have a strong foundation for innovation and prosperity. Our cities have the advantages of attracting educated immigrants and fostering an environment for the "creative class," both of which are required for a vibrant urban economy. But, on the other hand, the primary source of this urban prosperity gap is lower productivity. This lower productivity is the result of lower educational attainment in urban areas and our overall ineffectiveness in converting our natural, physical, and human resources into goods and services.

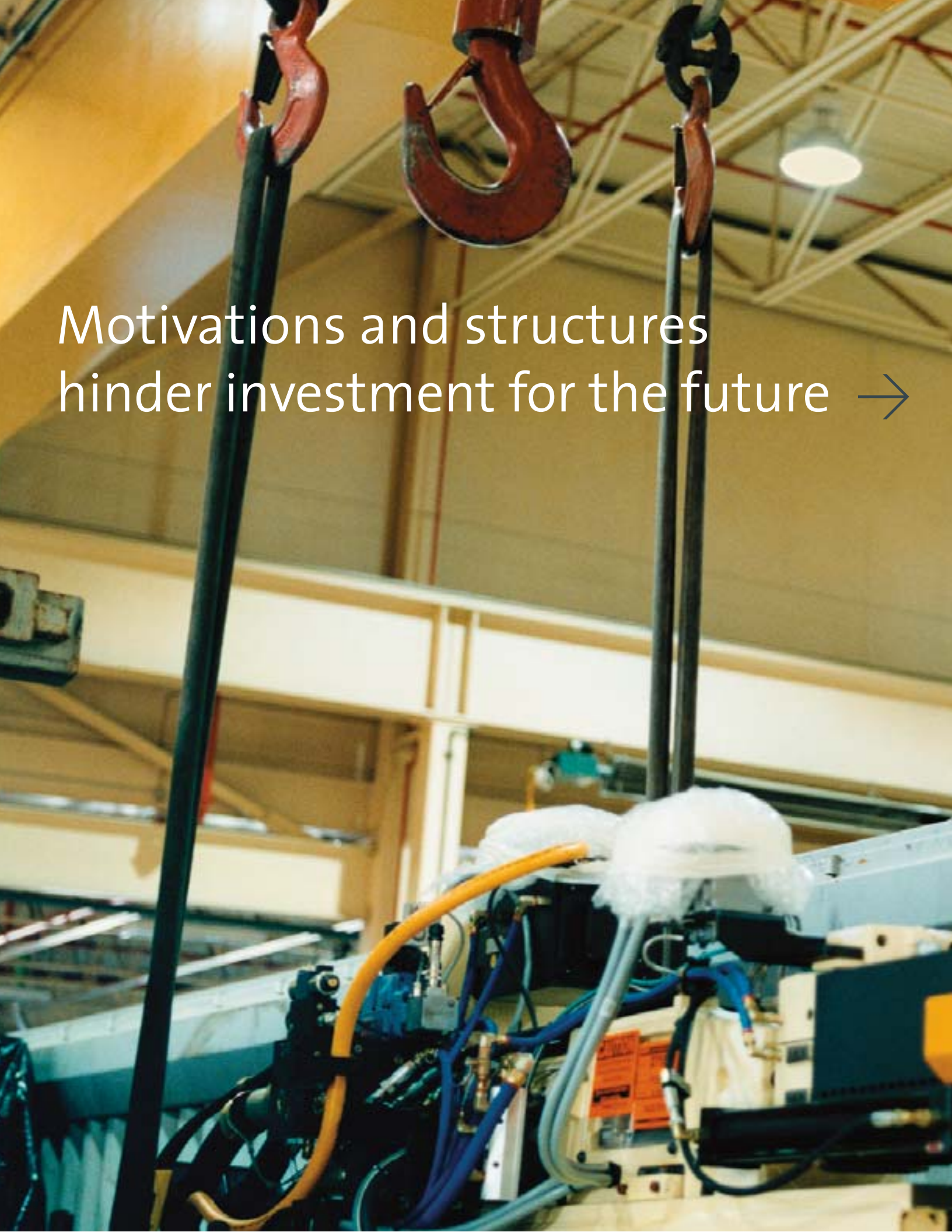
The Institute's research also identified barriers to urban prosperity in some of the key fiscal and governance structures. Ontario's metro voters are under represented in federal and provincial legislatures, tilting decision making away from urban interests that could encourage productivity. Furthermore, the municipal governance structure is inadequate to support a significant expansion of taxing and spending authority – which might improve prosperity by putting government power closer to the people.

Prosperity in Ontario's urban areas is further hindered by a federal fiscal framework that causes about \$1,500 per capita to leave Ontario annually for other parts of Canada through federal taxing and spending policies. This represents an important under investment in our cities.

As we have discussed in this section Ontarians – individuals, businesses, and governments – are under investing relative to our peer group of US states. In the following section we examine the other elements of AIMS to determine why this gap exists.

³² Institute for Competitiveness & Prosperity, *Missing opportunities: Ontario's urban prosperity gap*, June 2003.

³³ Richard Florida and Meric Gertler "Competing on Creativity: Placing Ontario's Cities in North American Context," December 2002, available online: www.competeprosper.ca

A photograph of a factory interior. In the foreground, a large red crane hook hangs from a black cable. Below it, a complex assembly of blue and orange cables is visible, some wrapped in white plastic. The background shows a high ceiling with a grid of white beams and a circular light fixture. The overall scene is industrial and somewhat cluttered.

Motivations and structures
hinder investment for the future →



Motivations and structures hinder investment for the future

Motivations and structures appear to drive our under investment behaviour

In the last year, the Task Force focused on the hypothesis that Ontarians' attitudes to business and entrepreneurship were the significant cause of under investment and our prosperity gap. In fact, our research indicates that attitudinal differences between Ontarians and peer state residents are not a significant roadblock to prosperity. Now we look at other research we conducted using the AIMS framework that points to other factors that likely explain the under investment pattern: our motivations, as represented by marginal effective tax burdens, and market and governance structures.

Attitudinal differences from our peer group are not a significant roadblock to our prosperity

Attitudes that lead to high aspirations, self-confidence, the desire to succeed, the entrepreneurial spirit, and creativity are important drivers of economic success. The Institute conducted attitudinal research among public and business communities. In Working Paper 4, *Striking similarities: Attitudes and the prosperity gap*, we concluded that attitudinal differences between the public and business in Ontario and the peer states are not significant roadblocks to closing the prosperity gap. In contrast to commonly held perceptions, we differ very little from our counterparts in how we view business and business leaders, risk and success, and competition and competitiveness.

Ontarians view business and business leaders in much the same way as do people in peer group states

We hypothesized that a contributing factor to the prosperity gap was a set of less favourable attitudes among Ontarians

towards business and its role in economic progress. In fact we found that:

- we hold business owners and leaders in much the same esteem as those in the peer group
- our favourable attitudes towards business and its contribution to prosperity coincide
- our ratings of entrepreneurship match
- views of the role of government in helping business generally agree.

Ontarians and peers have similar attitudes towards risk and success

It would be an impediment to our competitiveness and prosperity if Ontarians were more risk averse and less enthusiastic towards innovation. We conclude, however, that our attitudes in this area do not pose a barrier to closing the prosperity gap. We found no differences in the attitudes in these areas:

- both groups share similar views on risk-taking and innovation
- both groups concur on the importance and the causes of success.

Attitudes towards competition and factors of competitiveness are similar in Ontario and the peer group

One of the key themes in our investigations has been how Ontarians differ in their attitudes towards competition in general and in what are the key factors for competitiveness. Survey results indicate no differences between Ontario and its peer group:

- general public attitudes towards the concept of competition correspond
- business people in Ontario and the peer group welcome competition

- what is important for competitiveness is the same among Ontario and peer group business people
- willingness to take action to achieve a higher standard of living is similar.

The survey identified significant differences in attitudes towards education

Importantly, Ontarians are more likely to recommend a college diploma as the highest level of education for young people to achieve; their counterparts in the peer group are more likely to recommend a bachelor’s or graduate degree (Exhibit 14). These attitudinal differences matter given the importance of post-secondary education, specifically at higher degree levels, to personal income and overall productivity. The result is that Ontario is forgoing its potential for increasing GDP per capita and other prosperity gains.

This is one of the most significant findings in the attitudinal research. It is consistent with other research findings on educational aspirations as discussed above. It is likely an

important contributing factor to our educational under-attainment which accounts for about \$965 of our prosperity gap.

The attitudinal survey results raise the question, apart from post-secondary education, if attitudes do not explain this under investment, then what might? How can Ontario raise productivity to close the prosperity gap?

Governments need to address the widening disadvantage in Ontario’s effective tax burden – a critical aspect of motivations

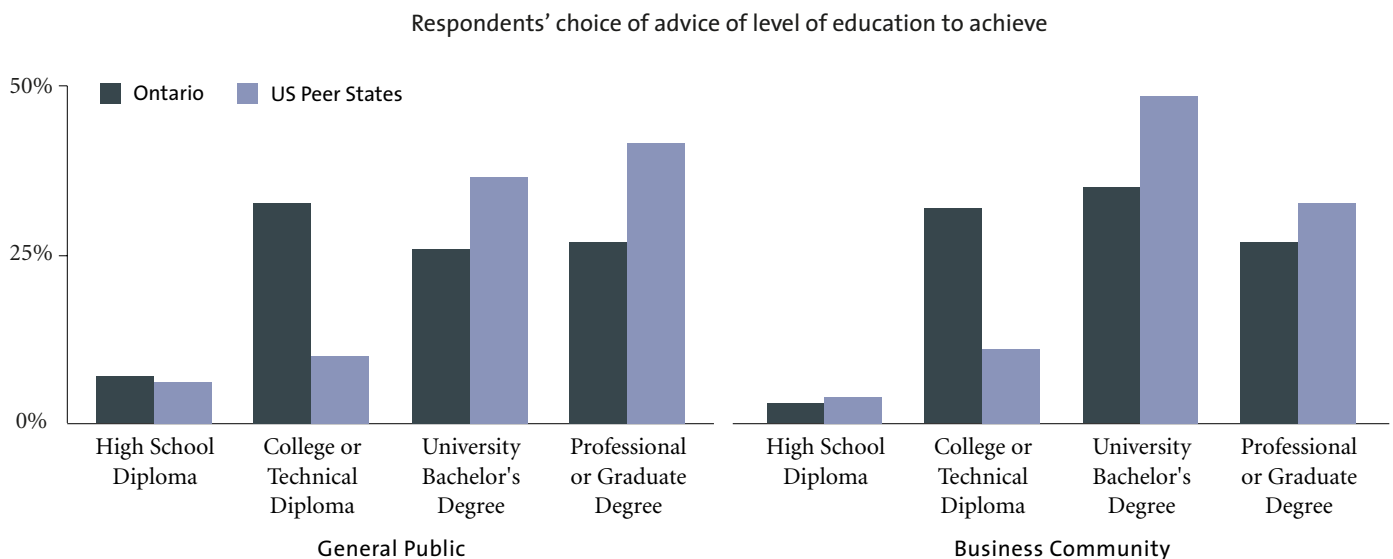
Governments face a balancing act in creating the fiscal environment for competitiveness and prosperity. As we have discussed, government investment expenditures in areas such as infrastructure and education can help establish the foundation for businesses and individuals to increase productivity. The appropriate level of consumption expenditures is an important determinant of our quality of life. These expenditures

also reduce the cost of doing business as governments take on some of these expenditures from individuals and businesses.

At the same time, taxes that are necessary to fund these expenditures can reduce motivation to work, invest, and be entrepreneurial. Governments need to balance expenditures and taxes on an ongoing basis to ensure that the region is competitive and that citizens are receiving an adequate level of services. Given our 10 percent shortfall in investment relative to our peers, the challenge is also to trade off spending on current consumption against long-term capital investment.

One means of assessing this trade off, especially as it relates to competitiveness, is to calculate marginal effective tax burdens on labour and capital. This approach calculates the effective impact of taxation on the cost of doing business by taking into account all the taxes paid, net of public subsidies, on all

Exhibit 14 Ontarians place less value than peers on university education



Q. If you had to give advice to a young person about the level of education they should have, which one of the following would you advise them to achieve?

factors used in producing goods and services. The approach takes taxes as a cost of doing business, based on the assumption that business will consider these costs as part of investment and production location decisions.

Given the importance of taxes on motivations and of the change in tax policies on both sides of the border, the Institute engaged international tax expert, Jack Mintz and Duanjie Chen,³⁴ a research associate with the Institute of International Business at the University of Toronto’s Rotman School of Management to update research conducted by Jack Mintz and Sergio Traviza for last year’s Annual Report. (See *Assessing Marginal Effective Tax Burdens in 2003* for a summary of Mintz’s methodology and the change in Ontario and the US during 2002.)

The tax disadvantage is widening, particularly on capital.

Mintz and Chen conclude that “Ontario’s fiscal position relative to similar US jurisdictions competing for jobs and capital is not at all competitive.” Their work indicates that today’s effective tax burden on all costs is 25.4 percent, 10.4 percentage points above the median of 15.0 percent in the five states. This difference has grown from 7.9 percentage points in 2002, when Ontario’s rate was 25.9 percent and the median of the five states was 18.0 percent.

This increase is the result primarily of a widening gap on taxes on capital during 2003, but also in taxes on labour (Exhibit 15). Marginal effective taxes on capital in Ontario are 29.0 percent – more than twice as high as the median rate of the five states analyzed. The gap is higher than in 2002. Taxes on labour are 24.7 percent, about

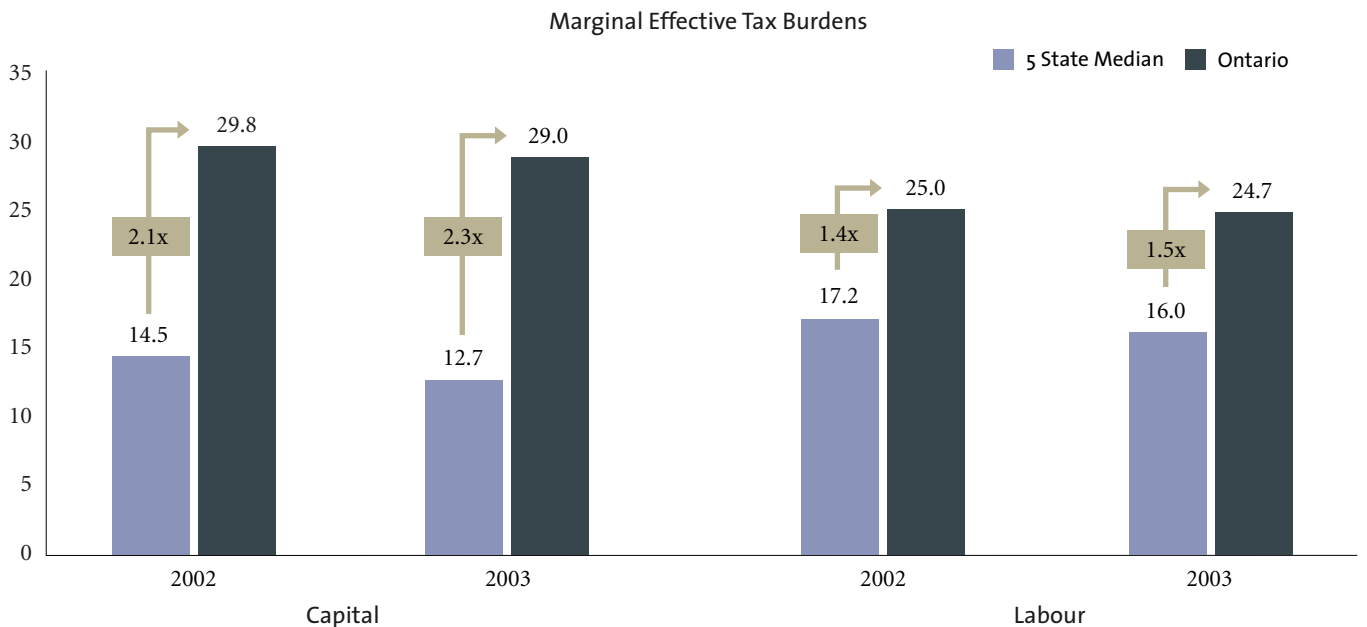
50 percent higher than the median in the five states. As with taxes on capital, the gap widened in 2003.

Far from “a race to the bottom,” as some observers describe tax reductions in Canada and Ontario, we still have meaningfully higher marginal effective tax burdens than leading highly industrialized US states. More important, this counter-productive gap is widening.

Why is Ontario’s effective tax burden on capital so high?

Taxation on capital is particularly important to productivity as it affects investment in upgrading and innovation. Drawing on the results of this study and other work they have done,³⁵ Mintz and Chen conclude that, “Ontario is a distinctly poor environment in North America for capital investments.”

Exhibit 15 Ontario’s tax disadvantage widened in 2003



Note: US ranges are as follows: Tax on Capital, 2002: 12.9%–18%, 2003: 11.4%–16.3%; Taxes on Labour, 2002: 16.1%–20.6%, 2003: 15%–19.8%
 Source: *Assessing Ontario’s Fiscal Competitiveness*, Duanjie Chen & Jack Mintz, Available at: www.competeprosper.ca

³⁴ Their report is available on the Institute’s Web site.
³⁵ Chen and Mintz (2003) “Taxing Investments: On the Right Track, But at Snail’s Pace”

Assessing Marginal Effective Tax Burdens in 2003 as a factor affecting Ontarians' Motivation to increase productivity

International tax expert Jack Mintz has developed a methodology for assessing effective taxes on capital and labour. For the Task Force's First Annual Report, the Institute engaged Mintz to compare Ontario's marginal effective tax burdens in Ontario against five of the peer states – California, Georgia, Illinois, Massachusetts, and Michigan.

- **Marginal effective taxation on capital** influences the willingness of firms to go the extra step and invest the incremental dollar in capital, such as machinery and equipment. In addition, they influence the decision by investors – from entrepreneurs to angel investors to venture capitalists to financial institutions – to invest in Ontario versus elsewhere. Mintz's analysis focuses on corporate income taxes, capital taxes, and sales taxes paid on business purchases. Infrastructure expenditures, research and development, and other business subsidies are subtracted from taxes on capital to arrive at the effective tax rate.³⁶
- **Marginal effective taxation on labour** influence the willingness of people to decide to work versus not to work, to work the extra hour, or to invest in upgrading their own productivity and earn more in the future. In the extreme, the higher the marginal effective tax burden on labour, the greater the incentive for workers to opt out entirely, either into the underground economy or to a lower tax jurisdiction. Mintz's analysis of taxes on labour focuses on personal income taxes, payroll taxes and sales taxes. Government subsidies for health care and education are deducted from these taxes.

For this Second Annual Report, the Task Force wanted to determine how our motivational disadvantage has changed in 2003 with tax changes on both sides of the border.

The analysis performed by Mintz and Chen takes two cases. The first considers a large multinational company that invests in North American jurisdictions, raising funds internationally. The second case (which is not reported here but is available in the full report available on the Institute's Web site) is based on small- and medium-sized businesses where entrepreneurs invest their own funds, and personal tax rates are important factors in overall tax costs.

What has changed since 2002?

In Canada, the federal government continued cutting corporate income tax rates by a further 2 percentage points in 2003 (with a similar reduction planned for 2004), which benefits non-manufacturing income. The most significant corporate tax changes in the US were the cuts – by half – to the dividend tax rate and to the extended bonus depreciation from 30 to 50 percent of qualifying investment expenditures. The bonus depreciation is to be phased out by 2006.

On the personal side, there were some reductions in personal taxes in Canada because of changes to tax brackets. US income tax cuts accelerated in 2003 with the top rate, for example, falling from 38.6 to 35 percent.

So, despite federal and provincial tax cuts in Ontario for 2003, Ontario is even less fiscally competitive today than it was last year. US deficits may preclude further reductions there, but current proposals under discussion would replace an export incentive regime with new investment initiatives that will significantly increase the competitiveness of the US corporate tax system.

Their conclusion that effective tax burdens on capital are above US rates is counter-intuitive, given that the statutory tax rate for large corporations is 36.6 percent in Ontario, which is below the average rate of 39.5 percent in the US. However, concentrating on statutory rates masks many other subtle but important factors including:

- The United States provides a more generous deduction for capital cost allowances (depreciation), sharply reducing the after-tax cost of investments in machinery and equipment
- The United States provides bonus depreciation for capital investments that reduces the effective tax burden on capital by almost 4 percentage points
- The United States treatment of inventory costs results in lower tax burdens than in Canada³⁷
- Capital taxes are much higher in Ontario compared to those in the United States; only Massachusetts has a capital tax among the five states analyzed
- Sales taxes on capital goods in the United States tend to be somewhat lower than in Canada for most industries.

Surprisingly, other factors play a minor role in explaining differences in effective taxes.

- While provincial and federal tax credits for research and development are more generous in Ontario, much of that advantage is offset by US research grants to businesses, particularly in the transportation and communications industries

³⁶ Property taxes are excluded from this analysis largely due to comprehensive data availability. As discussed in the Institute's Working Paper 3, *Missing opportunities: Ontario's urban prosperity gap*, business property taxes tend to be greater than services received by business while the opposite is true for individual residents. Consequently, Mintz's analysis slightly overstates the effective tax on labour and understates the effective tax on capital.

³⁷ The US tax code permits inventory costs to be written off using the last-in-first-out (LIFO) method while Canada permits the first-in-first-out (FIFO) method. LIFO results in higher costs for tax purposes and thus lower taxes when inflation exists, even in mild form. FIFO is advantageous in times of deflation.

- Infrastructure spending by governments on transportation and communication networks that improve the productivity of businesses (and excludes government buildings) is actually higher in the US than in Canada.

Why is Ontario's effective tax burden on labour so high?

Labour accounts for almost 80 percent of costs in our economy and so differences in taxes on labour are important to the overall cost of taxes. Mintz and Chen identify three factors.

First, personal taxes are higher in Ontario than in the five states, both on average and at the top marginal rates. The average personal income tax rate in Ontario across all workers and industries is 29.4 percent, between 5 and 9 percentage points higher than in the five peer states.³⁸

Second, federal and provincial sales and excise taxes are more than twice the rate of sales taxes in the five US states analyzed. Since Ontario workers must cover these costs when they consume goods and services, their effective wages are lowered or businesses are forced to pay higher wages.

Third, employer payroll taxes, net of benefits, particularly federal employment insurance and Ontario's Education and Health Tax, are higher than in the United States. Canadian programs take in more revenue than they spend in benefits and are, in effect, higher taxes than in the US.

Offsetting these higher taxes are the higher health and education expenditures by the Ontario and federal governments. Publicly funded healthcare benefits are significantly higher for workers in Ontario. Mintz and Chen calculate that the health subsidy for

an Ontario manufacturing worker earning \$60,000 is close to \$3,000 annually. Nevertheless, the higher health care subsidy in Ontario is insufficient to offset the disadvantage in the effective tax burden on labour costs.

Potential tax reforms could improve motivations – and productivity

Mintz and Chen conclude by identifying and assessing possible tax reforms. Recognizing the limited fiscal room to maneuver, they focus on reforms that reduce marginal effective tax burdens with the least possible tax revenue reduction. The Institute will be assessing these potential reforms in the coming year.

Rethinking taxation strategy in Ontario is one important way to begin to explore opportunities to increase investment and close the prosperity gap. Another way is to consider encouraging changes in market and governance structures that are holding us back.

The Task Force seeks new market and governance structures to support investments for innovation and upgrading

The under investment trap appears to be a significant challenge for Ontario in closing the prosperity gap. While our work over the past year indicates that attitudes are not significant in explaining the prosperity gap, we have seen that the de-motivating feature of uncompetitive taxes continue to be a part of the explanation of this under investment. In this section, we turn to the final element of AIMS – structures – to understand their effects on productivity in Ontario and to explore the opportunities they may offer for innovation and upgrading.

In the past year, we completed a thorough assessment of public governance structures and their impact on urban prosperity.

We concluded that these structures did not contribute adequately to urban – and hence Ontario's – overall productivity and prosperity. Our work in the area of market structures is less complete, but we are hypothesizing that they may not enhance our capacity to innovate and upgrade. While our attitudes are consistent with aspirations for world-class productivity and prosperity, our clusters of traded industries may not be as vibrant as those in the peer group.

We discuss these two elements of structures in this section.

Fiscal and governance structural elements hamper prosperity gains

As Working Paper 3 showed, Ontario's urban prosperity is negatively affected by public structures in two ways.³⁹ First, Canada's fiscal framework transfers resources from Ontario and its cities to other parts of the country at about double the rate experienced in peer states. We estimate that this cost Ontarians about \$1,500 annually in constant dollars over the 1992–2000 period, while the annual US federal transfer out of the peer states is only \$650 per capita. One of our concerns is that these transfers do not seem to be having a positive impact in reducing regional disparities in the Canadian federation. While it may be unrealistic to assume that change can be effected here, we can at least understand that these transfers are a cost to Ontario's prosperity – and likely Canada's. We should seek opportunities for innovation in Canada's fiscal framework that preserve the concept of sharing inside the federation while strengthening both national and regional prosperity.

Second, our political governance structures inadequately represent urban voters. In the federal legislature, if rural and urban voters had equal representation, urban voters would

³⁸ Tax analysts also look to the highest marginal personal income tax rate as a measure of tax competitiveness. The top rate in Massachusetts is 38.3 percent (taking into account deductibility of state taxes against federal taxes) on income above US \$312,000. Ontario's top tax rate is close to 47 percent applied to income above US\$70,000.

³⁹ Institute for Competitiveness & Prosperity, *Missing opportunities: Ontario's urban prosperity gap*, pp 36-40.

have 16 more of the 301 seats in the House of Commons; 14 of these 16 missing urban seats are in Ontario. Within the Ontario legislature, the average city region seat has 100,506 voters, while the average rural seat has 92,155 voters (based on 1991 census), meaning urban voters are also underrepresented at the provincial level. As with Canada's fiscal framework, we acknowledge that change is unlikely in the near term. We can only observe that, by inadequately representing our urban areas – the source of prosperity and productivity – representation in our current political structure is not likely contributing as fully as possible to Ontario's productivity and prosperity, or Canada's.

Finally, the research in Working Paper 3 concluded that Ontario's cities need improvements in their governance structures if they are to take on more taxing and spending authority.

Clusters of traded industries in Ontario may be underperforming

In Working Paper 1, *A View of Ontario: Ontario's Clusters of Innovation*, the Institute analyzed Ontario's clusters of traded industries⁴⁰ and concluded that a higher share of Ontario's employment was in clusters of traded industries than in the US peer group jurisdictions. In subsequent working papers and the Task Force's First Annual Report, we showed how the mix of clusters represents an advantage for the province and its city regions. What's becoming clearer now is that the quality of our clusters may not be adequate for them to achieve their maximum contribution to Ontario's productivity and prosperity.

Work performed by Michael Porter's Harvard-based Institute for Strategy and Competitiveness indicates that the main differentiator between successful and

unsuccessful clusters is the "context for firm rivalry and strategy." The most vibrant clusters are the ones that have greater competitive intensity. At the other extreme, the factor that had the least impact on a cluster's vibrancy was "factor conditions." Nearly all clusters are in place because of factor conditions; but success will not be guaranteed by strong input factors. As Porter has observed on many occasions, it is how companies compete not where or in what industry.⁴¹

As we think about the interplay between competitive intensity and attitudes, it becomes clearer that, while attitudes may be similar in Ontario and in peer states, the results are radically different because they are held in different competitive environments. An example from the sports world illustrates the point. A young person growing up in Georgia may be a talented hockey player and have healthy attitudes about winning and team play, along with personal aspirations to play in the National Hockey League. He and his parents may have invested in the best available equipment and his desire may motivate him to practise and train intensely. Nevertheless, an equally talented young person in Ontario with the same healthy attitudes, the right level of investment in equipment, and the same motivation to train and practise has a better chance of getting to the NHL.

Why? From his earliest days of playing he will be exposed to tougher competition, more advanced equipment, more opportunities to gain ice time to play and practise, better-organized leagues, and a system that develops the more talented players. Coaching is better in Ontario. While both boys are playing the same game and are highly competitive in their respective leagues, the intensity of the competition they each face is quite different. That's why many young hockey

players from the United States and Europe come to play in the Ontario Hockey League as a way to hone their skills and "prove" themselves for the NHL.

Some observers conclude that, despite free trade agreements, some of Canada's leading industries, such as financial services, telecommunications, and transportation, continue to be overly protected from international competition. They believe that greater openness to foreign competition would strengthen some of Ontario's important clusters of traded industries.

To verify the hypothesis that our prosperity gap may be partly the result of less competitive clusters, the Task Force will need to step up its efforts at comparing leading Ontario clusters with their counterparts in US peer states. We are currently testing out the methodology developed by the Institute for Strategy & Competitiveness and expect to assess several of Ontario's leading clusters in the coming year.

Both motivations and structures are contributing to our under investment pattern in Ontario. Opportunities for tax reform need to be explored to heighten motivations to invest. And, in addition to under performing clusters, other structures may be impeding prosperity. Structural barriers to access to capital for young, growing firms may be a reason for under investment in Ontario. In addition, structural barriers may be hampering efforts to commercialize new research and development findings. The Institute will explore these structural factors in the coming year.

⁴⁰ Michael Porter, *The Competitive Advantage of Nations*, The Free Press 1990.

⁴¹ See for example, "Clusters of Innovation: Regional Foundations of US Competitiveness", available through the Institute for Strategy and Competitiveness Web site, www.isc.hbs.edu.

The search for break out investment continues →





The search for break out investment continues

Ontarians need to break out of the under investment trap

Overall, Ontario is trading off spending more today rather than investing enough for tomorrow's prosperity. This is an issue for all Ontarians.

This year, as we continued our search for ways to close the prosperity gap with our peer group of states, we have zeroed in on the under investment pattern that permeates our economy as a major source of our lower productivity. In fact, we found that Ontario's investment falls 10 percent short of our peers' investment. We see under investment, for example, in higher education, machinery and equipment, and immigrant settlement. We also see that our cities, and our clusters of traded industries, are under performing. In addition, we have witnessed a widening bias towards consumption rather than investment in government spending.

In this final section we present recommendations for Ontarians to close the prosperity gap and set out our research agenda in the coming year.

The Task Force recommends break out investment

All stakeholders in our economic future need to examine their own strategies and actions to ensure that we are making appropriate investments for future prosperity. Governments at all levels need to lead the charge by re-orienting their own spending and by developing policies that drive additional investment in physical and human capital. Individuals and families have to increase the investment in their own human capital and well being. Our recommendations this year build on what we proposed to Ontarians in our First Annual Report a year ago.

Ontarians need to encourage students to invest in their higher education

Although our K-12 educational achievements compare favourably with those of our peers, fewer of our high school graduates go on to post-secondary education and especially graduate degrees. Since those with higher levels of education earn more over their lifetimes and our economy benefits more from their labours, we are losing out on the potential of those who fall short of their educational potential. Currently, Ontarians are less likely than their peer counterparts to encourage young people to pursue further education. Raising our educational aspirations is an important way to increase productivity.

Ontario needs to invest in processes for integrating immigrants more effectively into our economy

Ontario is becoming the home for many highly educated immigrants. We observed, however, that a large number are underemployed or even unemployed. The result is that we are forgoing their potential to contribute more to our economic well being. Some programs are successfully integrating immigrants into Ontario professions and employment. We encourage more programs and processes for settling recent arrivals into our economy and communities.

Ontario stakeholders need to take initiatives to address the chronic under investment by businesses in machinery and equipment

Capital investment is a major contributor to GDP growth. But both private and public sector investment in machinery and equipment and infrastructure in Ontario now lag capital spending in our US peer group. We estimate that our under investment costs Ontarians \$562 in lost GDP per capita every year. The clear answer is for business and governments to raise their investment especially in machinery and equipment to add to the productive capacity of Ontario's economy.

Ontario and Canada need to rethink our tax system to encourage investment

To increase our competitiveness, Ontario must continue to reduce taxes, especially taxes on capital. In our First Annual Report, we identified the disadvantage in marginal effective tax burdens in Ontario versus our peer group and showed how this affected Ontarians' motivations to invest. Our latest research indicates that the disadvantage has widened in 2003. The Task Force is not recommending specific tax measures – we are simply urging our governments to recognize

that taxes represent a disadvantage for Ontario's competitiveness that can be overcome by developing innovative solutions in our tax regimes.

Ontarians need to ensure market structures support break out investment

Our work during the year identified governance and market structures that impeded prosperity. Ontarians need to determine the negative impact of market structures on productivity and prosperity and how that can be reversed. One hypothesis for our under investment may be that our market structures are not stimulating the competitive intensity that forces the innovation and upgrading necessary to enable Ontario companies to thrive in the world arena.

The Institute research agenda focuses on structures and motivations

In the coming year the Institute for Competitiveness & Prosperity will continue its research to advance the measurement and understanding of the prosperity gap. Within AIMS, given the findings to date and the conclusions of this Second Annual Report, its focus will be on research into structures and motivations. We have identified some important questions that need answers in this Annual Report:

- How can we achieve the right level of competitive pressure – appropriate for spurring competitive investments in physical and human capital – in our clusters of traded industries and our globally competitive firms?
- How does the urban/rural prosperity gap affect our overall productivity or can much of it be explained by differing purchasing power?
- What are the greatest opportunities for tax reform to drive increases in productivity and prosperity?

Consequently our research will focus in the coming year particularly on the structures and motivations that will lead Ontarians to invest for prosperity.

How can market structures increase investment and prosperity?

We intend to conduct assessments of several leading clusters in Ontario against “best in class” in peer states using the template developed by the Harvard-based Institute for Strategy and Competitiveness. This analysis will help determine how well our market structures are contributing to the competitive intensity in the economy. This analysis will include the identification of key regulatory barriers in leading clusters that preclude innovation and upgrading, including access to growth capital and barriers to commercialization of innovative breakthroughs.

We will also assess the characteristics of market structures – competitive intensity, regulatory burdens, government support – that inform the success of our leading globally competitive enterprises in contrast with less globally successful firms.

Another set of important structural questions stems from the importance of urbanization to economic results. As we reported in Working Paper 3, Ontario's non-metro regions have a significantly lower GDP per capita than metro regions in the province. In addition, Ontario's low rate of urbanization continues to be the largest factor in explaining Ontario's prosperity gap. One assumption behind this analysis is that purchasing power is the same in rural and urban settings. If a dollar has the same purchasing power in rural areas as it does in urban areas, then the lower income in rural areas is cause for concern. Alternatively, if the rural dollar has greater purchasing power than the urban dollar – lower housing costs are one important factor supporting

this hypothesis – then the true urban/rural prosperity gap has been overstated. This refers to both the gap between Ontario and its peer group and between urban and rural Ontario.

The Institute will analyze differences in purchasing power parity between Ontario's urban and rural purchasing power. This is important to determine the true impact of the urban/rural prosperity gap. If rural Ontarians' living standard proves to be significantly lower than their urban compatriots, opportunities need to be identified to raise productivity levels to increase rural prosperity.

How can Ontarians' motivations address the investment challenge?

We have conducted a significant amount of research into identifying the disadvantage to Ontario from the widening gap in marginal effective tax burdens relative to the peer states. In the coming year we shall work to identify the key opportunities for breakthrough tax reform that address the investment challenge we have identified. For example, what will lead Ontarians to keep investing to the level of their peers? What are the barriers to achieving similar investment levels? How quickly can Ontario gain an advantage in the important area of marginal effective tax burdens?

Investing for prosperity is an important way for Ontarians to continue closing the prosperity gap with peer group states. The Task Force and the Institute are committed to developing the analytical basis and insights that will lead to innovation and upgrading to raise productivity and prosperity throughout the province.

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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

Jordan Brennan
416-920-1921 x228
J.Brennan@CompeteProsper.ca

Clairelle Poole
416 920 1921 x224
C.Poole@CompeteProsper.ca

Stephen J. Rouatt
416 920 1921 x227
S.Rouatt@CompeteProsper.ca

Jennifer Stewart
416 920 1921 x223
J.Stewart@CompeteProsper.ca

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