



10 January 2008

L. R. Wilson  
Chair, Competition Policy Review Panel  
280 Albert Street, 10<sup>th</sup> Floor  
Ottawa, Ontario K1A 0H5

Dear Mr. Wilson,

I am pleased to be writing to you and your Review Panel colleagues on behalf of the University of Alberta in response to the document "*Sharpening Canada's Competitive Edge*". Creating an environment that enhances Canada's competitiveness and productivity, and tackling the related challenges is most critical to advancing Canada's economic and social prosperity, positioning us as global leaders and agenda setters, and enabling Canadians to have a quality of life that is envied around the world.

As I am sure you can appreciate my comments and suggestions will be focused on ensuring that Canada is a "Destination for Talent, Capital and Innovation". Canada's ability to attract and retain outstanding world class human talent underpins the success of our global competitiveness as a nation. Human talent is the foundation for clusters of creativity and innovation where ideas, capital, technology and people will converge.

### The Outcome

In order for Canada to become a destination of choice for talent, capital and innovation, we must first as a nation identify a series of related outcomes that will guide our policy and investment decision-making.

- Canada owns the international "Talent and Knowledge Agenda". Canada is a global "super-magnet" for talent, attracting and retaining internationally renowned (this includes Canadian) researchers, students, businesses and industries.
- Canadian researchers, universities, industries and government are driving and influencing global agendas, finding solutions to global problems and have a hand in leading international breakthroughs and setting international market trends across fields in our strategic national interest.
- Canada has created an environment where clusters of talent and innovation emerge, drawing worldwide attention and building a Canadian reputation for global innovation, and economic prosperity and diversity.
- Canadians enjoy the best standard of living in the world.

## The Global Backdrop

Looking forward it is clear that global competition for capital, innovation and human talent will only increase with the emergence of new global giants like China and India. In both countries, development is accompanied by striking increases in university enrolment. In China the percentage of students in university is 17% up from 3% in 1980. Similarly, enrolment in university education in India grew significantly throughout the 1990s, increasing from 4.9 million to 9.4 million students. The rapid economic growth and increase in available capital, buttressed by increasing numbers of well trained and educated people leading innovation in both countries will only heighten global competitiveness. It is estimated that 40% of the American high-tech industry already has a presence in Asia; and by 2007 China and India will have accounted for 31% of the world's research and development personnel, up from 19% in 2004.

A series of articles in the *Economist* entitled "The Brains Business" described the emergence of a "super league of global universities," schools identified as global magnets for talented people who produce a disproportionate share of cutting-edge research. Not one Canadian university made it to the top twenty. But 17 American universities did.

In February 2006, the United States launched the *American Competitiveness Initiative – Leading the World in Innovation*. This initiative committed close to \$6 billion in 2007 to increase investments in research and development, to strengthen education, and to encourage entrepreneurship.

Against this backdrop, Canada needs to ensure that it makes globally competitive and visionary policy decisions and financial investments that support the advancement of human talent, research and innovation.

## The 21<sup>st</sup> Century Model for Competitiveness

The 21<sup>st</sup> century model for competitiveness is one that breaks down barriers between industry, government and academia and focuses on creativity, collaboration and capitalizing on the strengths of each partner. The model creates dynamic and powerful hubs or clusters of talent and creativity, fostering innovation and allowing for the rapid transfer of ideas and breakthroughs into the marketplace. These clusters build profile and reputation for the regions in which they exist and become beacons for global talent and capital.

Also, in the 21<sup>st</sup> century model, the kinds of research (discovery-oriented, use-inspired and applied) that lead to new industries (think the transistor), open innovation and disruptive innovation, are primarily being done either wholly or in part at universities. As such, private sector corporations that want to capitalize on these breakthroughs are finding new ways to partner with or be near universities. For example, Intel has established research laboratories adjacent to the Universities of California (Berkeley), Washington (Seattle), Carnegie Mellon and Cambridge, with researchers working side by side to allow Intel to rapidly transfer ground-breaking discoveries into products. Similarly, Xerox Canada has partnered with the National Institute for Nanotechnology (NINT) at the University of Alberta to achieve a similar outcome. In addition to the transfer of ideas, the talented students being educated at these institutions become familiar with the partnering industries and are quickly absorbed by them upon graduation.

### Building on an Established Base

Over the past decade successive federal governments have been visionary in their investments into the federal Granting Councils, the Canadian Foundation for Innovation and the Canada Research Chairs, among other programs. These investments have allowed Canadian universities and other research institutes to build a strong foundation of researchers across disciplines. Given the relative size of Canada, the next step should be to develop policy and make investments that will allow for the creation of global clusters of excellence in areas related to our strategic national interests, or areas that ought to be in our strategic national interest. Not only would the clusters attract talent, capital and innovation, but they would do so focussing on areas that are critical to Canada's global competitiveness and productivity.

In order to build on our current foundation, and attract and retain increased human talent, the following recommendations should be considered:

1. The federal Granting Councils and Canadian Foundation for Innovation should be funded at internationally competitive levels and include funding the full costs of research.
2. Canada must preferentially invest in areas where it has a competitive or comparative advantage. This will create a cadre of the most outstanding research teams in the country and in the world, and should be led by those who have already succeeded in breakthrough discoveries. This kind of investment will create profile and act as a "super-magnet" attracting talent and capital into those areas that are in Canada's strategic national interest.
3. Canada should consider a series of regulatory or tax incentives for industries that choose to foster collaboration between sectors leading to faster translation of research and innovation into the marketplace. For examples, those industries that wish to partner with research universities or institutes in order to create clusters or hubs might receive some incentive to do so.

Talent is a magnet for talent, and it is the foundation for competitiveness and productivity. It leads to the convergence of ideas, capital, technology and people and creates a cluster of excitement and opportunity. For Canada to realize its goals related to competitiveness and productivity, it must become a destination for talent, capital and innovation by creating an environment where people can see opportunity and where promise can be fulfilled.

Once again, thank you for the opportunity to make a submission to you and your colleague. I look forward to reviewing your future recommendations.

Yours sincerely,



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