Standing Committee on Finance (FINA)

Pre-budget consultations 2012

Canada Foundation for Innovation, Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada

Responses

1. Economic Recovery and Growth

Given the current climate of federal and global fiscal restraint, what specific federal measures do you feel are needed for a sustained economic recovery and enhanced economic growth in Canada?

ACTION: Focus investments on research excellence. The Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council, Social Sciences and Humanities Research Council and the Canada Foundation for Innovation believe continuing to foster a strong national research and innovation system is crucial to sustaining Canada's economic recovery and long-term growth. The Government of Canada, in conjunction with the provinces, has already taken great strides to ensure the country's research institutions have the capacity to address national priorities and contribute to a vibrant future. Those institutions include universities, colleges and academic health sciences centres—all key parts of the country's innovation system. Ongoing investment will see that they continue to have the right people, the right infrastructure and the right operational resources to conduct research that yields social, environmental, economic and health benefits for all Canadians. The research carried out in Canadian universities, colleges and academic health sciences centres produces knowledge and technological advances that bolster competitive advantages for companies in all sectors. It contributes to the development and marketing of new products and services, reduces taxpayer burden for essential services and improves quality of life. This research is widely varied. It ranges from the creation of bovine vaccines that safeguard our food and interventions that prevent infections in intensive care units to wireless technologies for next-generation smartphones and glass-fibre concrete additives that triple the lifespans of bridges. Research investments have also yielded innovations in corporate governance, banking systems, marketing, community planning, policymaking and social programs—improving the lives of Canadians and creating process efficiencies in public and private sector enterprises. In this period of fiscal restraint, Canadians will benefit most from research investments focused on areas of established strength, with projects selected rigorously and carefully based on excellence. This will ensure the most efficient use of public funds and the greatest potential returns in economic, social, environmental and health impacts.

2. Job Creation

As Canadian companies face pressures resulting from such factors as uncertainty about the U.S. economic recovery, a sovereign debt crisis in Europe, and competition from a number of developed and developing countries, what specific federal actions do you believe should be taken to promote job creation in Canada, including that which occurs as a result of enhanced internal and international trade?

ACTION: Facilitate academia-industry partnerships, and international linkages, to help Canadian businesses succeed. Researchers at Canada's universities, colleges and academic health sciences centres are already engaged in building strong international linkages and private-sector partnerships that allow companies to take advantage of research as a competitive asset. Partnerships like these

facilitate exchanges of knowledge and talent that open doors to new markets and create learning opportunities for the next generation of entrepreneurs. Today, for example, the University of Alberta is working with one of Germany's leading industry-focused applied research organizations, the Helmholtz Association, to develop technologies that will transform oil sands production—combining the research capacity of two outstanding organizations to address crucial industry challenges. Canadian and German companies will both benefit from this collaboration and, importantly, top graduate students will gain the skills they need to lead this sector toward the use of more sustainable and profitable practices down the road. Academic-industry partnerships also help ensure our companies have world-class products to sell. This is crucial given the importance of international trade to Canada's future economic success. Our aerospace industry is a world leader and major contributor to the Canadian economy, employing more than 80,000 people in over 400 firms. Research at Canadian universities is at the forefront of delivering aerospace innovations. In partnership with Bombardier Aerospace, Bell Helicopter, Textron Canada and CAE Inc., teams at McGill University are designing technologies for safer and more fuel-efficient airplanes and helicopters. Success in the new economy depends on a mix of strategic, structural, technological, human and environmental factors. The Université du Québec à Trois-Rivières Research Institute for SMEs (small- and medium-sized enterprises) has identified several of these factors and developed a series of diagnostic tools now used by 600 Canadian companies to help them evaluate their competitiveness, innovation, leadership and other aspects of corporate performance. This kind of research is helping Canadian businesses compete.

3. Demographic Change

What specific federal measures do you think should be implemented to help the country address the consequences of, and challenges associated with, the aging of the Canadian population and of skills shortages?

ACTION: Continue to support research that improves productivity, increases the skills of Canadian workers, and promotes quality of life. Research in economics suggests that an important way for Canadians to maintain their quality of life—given the shrinkage of the country's workforce—is to increase productivity. The Government of Canada's most important role in increasing productivity is to support both the generation of new knowledge that leads to innovation and the training of highly productive workers. These individuals will have the skills to use advanced technologies, an understanding of complex social and cultural interactions, and the intellectual and technical capacity to meet modern challenges. Boosting productivity, however, demands more than simply reducing input costs and maximizing returns. As a country we must also find ways to maintain the vitality of our workforce, regardless of its size. Continued support for research will help ensure all Canadians, including young workers and those of advanced age, can access the services and technologies they need to work longer, stay healthy and maintain a high quality of life. Such technologies being researched today include mobility aids that prevent falls among seniors. Researchers today are seeking to identify the conditions for "successful aging." The Canadian Longitudinal Study on Aging, a national, long-term study of adult development and aging, is examining determinants of health ranging from gene-environment interactions, lifestyle and chronic diseases to transitions in retirement and wealth. The study will give policymakers, businesses and citizens the knowledge they need to adopt and promote best practices that result in a healthy, more productive workforce. The aging population is a demographic reality: excellent research can also make it an opportunity for economic success and better quality of life. The University of Toronto's Technologies for Aging Gracefully Lab, for example, combines computer science, engineering, human-computer interaction, psychology, social work and interface design to develop assistive technologies that help seniors stay mentally sharp, physically active and connected to their families. TAGLab is collaborating with Revera Inc., one of Canada's largest senior citizen service providers, to develop and apply age-friendly technologies.

4. Productivity

With labour market challenges arising in part as a result of the aging of Canada's population and an ongoing focus on the actions needed for competitiveness, what specific federal initiatives are needed in order to increase productivity in Canada?

ACTION: Continue to support the spectrum of research–from fundamental to applied–as the most effective means of stimulating innovation and increasing productivity. The Government of Canada should continue to support the full spectrum of research: applied research that leads to incremental innovation and product development, as well as fundamental research that spawns transformative technologies and entirely new industries. As our competitor countries have realized, supporting this entire research spectrum is the most effective means of stimulating innovation and increasing productivity. Researchers in Canada's post-secondary institutions and academic health sciences centres are delving into areas of study such as quantum physics and genomics, computational biology and health economics that will fuel the creation of future industries and change our approaches to dealing with pressing social issues. These same researchers are also establishing global hubs of expertise in cardiology, ocean science, forestry and other key disciplines. This broad range of research is crucial to Canada's social and economic success. As one case in point, researchers at Cégep de Saint-Hyacinthe are collaborating with Belt-Tech Products Inc.—a manufacturer of high-performance webbing for belts, straps and slings that employs 115 people in Granby, Que.—to test and develop specialized textile materials for its products. This research partnership allows Belt-Tech to meet the stringent safety standards its clients demand and to diversify its product line to keep up with changing technology. In Waterloo, Ont., researchers at the Institute for Quantum Computing have employed insights into the fundamental properties of matter to invent the most advanced data encryption technologies in the world. These are now being adopted by the financial industry to safeguard trillions of dollars in transactions. In the end, successful economies require healthy, productive populations. Canada needs to expand its support for researchers who can conduct the kind of research that results in breakthroughs and innovations to keep our workforce healthy and productive.

5. Other Challenges

With some Canadian individuals, businesses and communities facing particular challenges at this time, in your view, who is facing the most challenges, what are the challenges that are being faced and what specific federal actions are needed to address these challenges?

ACTION: Provide ongoing support for research that creates opportunities to strengthen communities across the country. Communities of all sizes across Canada are facing unprecedented challenges related to economic uncertainty, industrial transformation and intensifying international competition. Knowledge produced by Canadian researchers can help address these challenges and help maintain a high quality of life. Natural resource, manufacturing and service industries remain Canada's engines of wealth creation—and are at the heart of many of the country's communities. Research institutions supply the ideas and talent needed to help these industries stay competitive and profitable. By supporting cutting-edge research which helps these industries evolve, create jobs and grow, the Government of Canada is also building strong communities that will prosper into the future. Take forestry: it is a key employer in more than 300 communities across Canada. FP Innovations, one of the world's largest private, non-profit forestry R&D organizations, is helping the sector shift from producing only raw lumber to creating value-added products by combining expertise from chemistry, nanotechnology, marketing and global trade economics. A collaborative research partnership for sustainable forest management led by the University of New Brunswick is helping industry, government and non-governmental organizations reach common ground on how to approach issues such as biodiversity conservation, forest habitats, climate change and carbon emissions to ensure a vibrant economic and environmental future for the region. But Canada has many economic drivers. Tourism is

an economic boon for many communities. Since 2008, The Image Mill, the largest projection show in the world, has helped attract more than a million visitors to Quebec's capital. Last summer alone, it generated $4.3 million in economic activity and 97 full-time jobs. The show's producers turned to researchers at a digital lab at Université Laval to access imagery from Quebec City's colourful past—now projected onto grain silos in the harbour. Again, the link between prosperity and health cannot be overlooked. Promoting healthy lifestyles, preventing disease and developing new, cost-effective models of care are all critical to the vitality of communities—and will ultimately ensure Canadians continue to enjoy a high-quality, accessible, affordable health care system.