Some Reflections on the Expert Panel Report on Business Innovation in Canada

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ABSTRACT

This article reviews the Council of Canadian Academies Expert Panel report on business innovation. It finds the report comprehensive in its gathering and assessment of available research, innovative, in its own right, in its analysis of innovation as an outcome of business strategy formation, and impressively well ordered and written. Both lay readers and professional students of innovation and labour productivity will find the report to be of great value.

IN 2007, THE GOVERNMENT OF CANADA requested the Council of Canadian Academies (CCA) to canvas the innovation performance of Canadian business, and in particular to shed light on Canada's relatively weak investment among OECD countries in innovation inputs (and the consequent inferior growth in the rate of labour productivity, particularly over the last two decades). The CCA established an Expert Panel to address this request. The resulting report *Innovation and Business Strategy: Why Canada Falls Short*, presents a comprehensive survey of the research literature and a skilful and balanced interpretation of that literature that will instruct both professional and lay audiences. Further, in seeking to advance understanding of Canada's poor performance, the Panel itself innovates in analyzing the possible explanations by examining the factors that can be thought of as influencing innovation as a business strategy. All of this is presented in eleven chapters of inexorable logical flow, the interpretations of the evidence balanced and appropriately qualified, and with a felicity of presentation that is continuously striking. Though issues of measurement and interpretation in matters of innovation and productivity are inherently complex, one would not hesitate to recommend the Panel's report to any intelligent reader seeking to gain command of issues that are of considerable moment in the fortunes of Canada and Canadians.

Peter Nicholson, in the introductory article of this symposium, has summarized the report. The coherence with which the story is told and the care with which it is presented is a central strength of the report. The body of evidence which the Panel surveys and cites to measure the innovative performance of the Canadian business sector and through that performance the alarmingly disappointing growth in labour productivity serves to concentrate the mind, perhaps even those minds aware of many of the elements of the story. After making clear the

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conceptual links between innovation, productivity growth, per capita output, incomes and well-being, the empirical evidence which the Panel gathered has a considerable cumulative weight. The long-run difference in output per capita of roughly 20 per cent relative to the United States, almost entirely due to differing levels of labour productivity, appeared to be sharply narrowing into the mid-1980s as a broad-based convergence of OECD countries with the U.S. seemed to be in train. After peaking at 93 per cent of the U.S. level in 1984, annual labour productivity growth in Canada departed the train, leading to a steady descent to a level less than 80 per cent in 2007, a level not seen since the late 1960s. Further Canada's average labour productivity growth over the same period ranked 15th out of 18 OECD countries. Of this lagging performance around 90 per cent is attributed to the poor performance of multi-factor productivity in the business sector, the residual in the decomposition of labour productivity growth after increasing capital intensity and improvements in the quality of the labour force have been accounted for. Part of the explanation involves the slower investment in information and communication technologies (ICT) by Canadian businesses.

In pursuit of a more comprehensive explanation the Panel devotes a chapter to a thorough examination of the innovation performance of Canadian business. The report presents a rich and sophisticated canvas of what is known about the inputs, outputs and outcomes of business innovation activity. Among the elements examined, machinery and equipment investment, the quality of labour inputs, and an array of output and outcome measures, it is the almost astonishing under-performance of the business sector with respect to research and development expenditure that is at the heart of the story.

Most industries in Canada perform little or no R&D. Business sector R&D expenditures as a percent of GDP (BERD) hobble along at roughly half the US level and rank in the bottom half of relevant OECD countries. When it is estimated that a sustained one-tenth of one percentage point increase in BERD would lead to an increase of 1.2 per cent in GDP per capita, and when it is understood that Canadian BERD levels of approximately 1.0 per cent compare with the US level of 2.0 per cent, it is impossible to escape an explanation of Canadian BERD as a central issue. Further the fact that R&D expenditures are generally thought to carry with them consequential positive externalities underlies two central understandings of why private sector R&D may be underdone and why there is a substantial rationale for public policy involvement. To the public policy issues this review will return.

The report then seeks to broaden examination of the possible factors affecting business sector innovation performance by focussing discussion on innovation as business strategy. The Panel, with justification, sees the attempt to direct the discussion in this way as a substantially innovative contribution to the understanding of the behaviour of Canadian firms. Under five headings — structural characteristics, competitive intensity, climate for new ventures, public policies, and business ambition — the report addresses successive chapters to broadening understanding of the factors influencing firm behaviour. While the discussions under each head are again thorough and provide persuasive elements of understanding, one is left with the sense that the diagnosis is unsettlingly insufficient.

Though the Panel takes care to describe the total body of its work as 'a diagnosis' rather than a policy prescription, it recognizes that the body of facts and informed opinion that it offers are of 'policy relevance'. In fact, unless one's professional preoccupation is directed exclusively at understanding, it is difficult to read the Panel's report without continuously reflecting on its policy implications. And, indeed, it is difficult not to feel that the Panel embeds its analysis in approved Canadian policy postures of the last two decades and is itself a little baffled that the private sector's performance has been so disappointing. Controlled inflation, deregulation of product and labour markets, very sharp reductions in the program expenditures of the federal government and with that reduction a dramatic decline in the overhang of public debt, a scientific research tax credit as rich as any among OECD countries, all the fundamental prescriptions of three decades of neoliberal economics do not appear to have yielded any very measurable payoff.

To be perhaps a little unkind, though the report approves the potential complementarities between government and academic research, it generally seems to approve of low tax regimes (recognizing that all taxes are disincentives) without any very full discussion of the 'civilization' that taxes buy, affecting the context in which business ventures proceed. Further the existence of complementarities carries with it the notion of public and academic R&D supporting private sector innovation. Though well outside the Panel's mandate to explore, it may be that progressively impinging social limits to private growth may require an increasing share of Canadian R&D to be shouldered by the public sector as public rather than private goods come to dominate future enhancement of the well-being of Canadians.

However that may be, the Panel does recognize that its presumption of globalization proceeding apace where the well-being of Canadians is critically dependent on the competitive aspects of private-sector productivity growth may have to be conditioned by the dramatic collapse of growth currently in progress. There seems little doubt that this collapse, however and whenever growth is resumed, will lead to a substantial reaction to the policy structures of the past 30 years and the probable acceptance of a much expanded role for government. This probability is further enhanced by the steadily increasing evidence that climate change will compel governments to confront much more radical policy responses than so far contemplated. One does not have to believe the well known UK scientist James Lovelock (www.jameslovelock.org), that the collapse of world population to the neighbourhood of one billion by 2100 is already foregone to believe that the ascending evidence, as in the Stern Report, commends much more dramatic action. Once again the Panel makes reference to the relevance of climate change issues without embedding their imperatives in the analysis.

Both because these developments could be said to have overtaken the Panel's report and because the Panel clearly eschewed a direct concern with the report's policy implications, it is not to be critical of the report to suggest that these two issues —recession/depression and climate change — may be said to offer the opportunity to confront some of the issues which the report cites as inhibiting private sector innovation. One begins with the Finnish model, the rapid transformation of a resource-driven economy to one dedicated to R&D and innovation, which the report cites. It further suggests that the government/public sector/private sector understandings and commitment needed to implement such a rapid transformation is only possible with a much more homogeneous population and culture than Canada offers.

The notion that the lack of the possibility of a cohesive public understanding precludes public/private sector collaboration in Canada has been often asserted, particularly with respect to the possibility of industrial policy or more elaborate welfare structures. In part, of course, this may be thought of as reflecting the influence of a competing model to Canada's south. In part it reflects an industrial structure which, as the panel notes, places much Canadian private sector activity 'high up the value chain', either as subsidiaries of foreign parents, or in the extractive industries, content with up-stream profits and disinclined to invest in complementary and down-stream activities. Given sufficient urgency however, it can be argued that there is little evidence of an incapacity in Canada to mount concerted action. It can be further argued that the growing urgency of an elaborate response to global warming will demand not only the pricing of carbon (by whatever scheme) but invention and innovation across the broad waterfront of alternate energy systems, less damaging extractive industries (e.g. carbon capture) and revolutions in transportation. Indeed it may be that Canada's continued reliance on resource exports to offset its disappointing productivity record will depend on finding urgent solutions to the global warming impacts of their production. Beyond particular fixes, one might think of Canada as having some sort of comparative advantage in leading such revolutions, turning necessity to opportunity, and beginning the long trek to serious sustainability designs.

Such concerted action, both through structures of public policy and more explicit collaboration, may be made more conceivable by the need to find investment expenditures that can provide the underpinnings for the climb from the deepest economic trough since the 1930s. The 'new and better ways to do valued things' (the Panel's definition of innovation and the sources of the next 'bubble') may demand more explicit collective resolve than reliance exclusively on private markets. The world has been launched on a soul-searching, not just around the reformation and regulation of financial systems and institutions, but also to revisit the dominant faith in private markets in shaping public policy over the past 30 years. It may even be that 'share-holder value' will cease to be the sole criterion by which enterprises are judged and a rising importance of longer-term considerations and social purpose may elevate the role of 'innovation as a business strategy'.