

that many of the direct economic returns once thought to derive from support for advanced technology industries may have been considerably reduced due to fierce international competition. Assistance to industry in Canada can be and often is outbid elsewhere.

When dealing with advanced technology, not only employment is at stake but competitiveness and national prestige. Due to the perceived economic benefits of advanced technology industries (i.e., more productive and higher paying jobs, enhanced exports and local infrastructure and other "externalities" or spill-over benefits such as learning curve economies), these industries also receive protectionist treatment in many countries.

Thus, one important topic in the current economic debate pertaining to advanced technology trade is the connection between "innovation" and "growth". The usually observed growth benefits derived from direct financial support for R&D activity are currently being reviewed by the Micro-economic Policy Analysis Branch of Industry Canada and by the OECD among others.<sup>3</sup> The current consensus also emphasizes the importance of intellectual property rights such as copyright for encouraging innovations, although some recent work puts the focus more clearly on the importance of encouraging innovation diffusion.<sup>4</sup> In addition, structural impediments to market entry ("systems friction") and the nature of business-government relations often involve instruments of domestic technology policy and are a growing topic of discussion.<sup>5</sup> While this Paper does not propose to resolve these hotly contested issues, their existence underlines the centrality of advanced technology to the evolving international trade policy agenda.

## ● The Canadian Context

Canadians have always been required to focus on international markets and linkages for technology, much as we have always needed access to foreign capital

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<sup>3</sup> For example, see Pierre Fortin and Elhanan Helpman, *Endogenous Innovation and Growth: Implications for Canada*, Industry Canada Occasional Paper Number 10 (August 1995), pp.27-30. For a qualifying statement that suggests that, in certain circumstances, the growth impact of incremental R&D might be less than previously posited in the economics literature, see Alwyn Young, *Growth Without Scale Effects*, National Bureau of Economic Research, Working Paper No.5211 (August 1995).

<sup>4</sup> For example, see P.A. Geroski, *Innovation and Competitive Advantage*, OECD, Economics Department Working Papers No. 159 (Paris 1995) and I. Prakash Sharma, *Optimal Patent Term and Trade: Some Considerations on the Road Ahead*, Policy Staff Paper No.93/12 (October 1992).

<sup>5</sup> For example, see Sylvia Ostry and Richard R. Nelson, *Techno-nationalism and Techno-globalism: Conflict and Cooperation*, Washington, DC: Brookings Institution (1995). See also, David Mowery *The Challenges of International Trade to U.S. Technology Policy*, in *Linking Trade and Technology Policies*, (1992), pp. 121-38.