

In a pamphlet published by the Japanese Ministry of International Trade and Industry (MITI) entitled "Issues and Trends in Industrial/Scientific Technology - Towards TechnoGlobalism", this criticism of Japanese industrial policy is addressed as follows: "Industrial/scientific technology activities cannot be completed wholly within the border of a country. Policies related to these activities are increasingly taking on international significance and must always be considered from a global perspective. In other words, there is a growing recognition of the concept of technoglobalism where related policies should be developed with the purpose of maximizing the benefit of science and technology to people all over the world. This is a concept that should be promoted with international cooperation and coordination. There is a need to clarify the foundation and the contents of this concept."

It can be argued the technoglobalism favours Canada, even if some of our programs have de facto restrictions on eligibility similar to those applied in the U.S. and Europe, because, as a relatively small, export-oriented economy, we cannot source all our technological needs domestically. Canada's historical dependency on foreign sources of technology is attested to by the Technology Balance of Payments Coverage Ratio<sup>36</sup> which measures the extent to which a country covers its own technological requirements. Canada's ratio is less than one for every year except 1988 when it rose to 1.05, in comparison to the United States, which ranges from a low of 5.26 (1989) to a high of 7.30 (1983), and Japan, which ranges from a low of .76 (1987) to a high of .99 (1984).<sup>37</sup>

However, patent statistics, on which the coverage ratio is partially based, provide only a limited overview of the national technological capacity. Leclerc and Dufour have calculated a ratio of Business Enterprise R&D(BERD)/technologies payment to define the relative portion of national and foreign sources of technological progress. Canada's ratio (1:5) is among the worst, indicating that "the import of technology is relatively large in relation to the national R&D [effort]."<sup>38</sup> Furthermore, for the years 1984 to 1987, Canada had the highest proportion of business enterprise R&D financed from abroad of all OECD countries.<sup>39</sup>

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<sup>36</sup> This ratio is calculated by taking the receipts from patents, licenses, trademarks, designs, technology and closely related technical services (including technical assistance) and industrial R&D carried out abroad, and dividing this amount by the payments to off-shore sources.

<sup>37</sup> OECD, Main Science and Technology Indicators, (1990:2), Table 82, p. 49.

<sup>38</sup> Michel Leclerc and Paul Dufour, "International S&T Collaboration", in John de la Mothe and Paul Dufour, eds., Science and Technology in Canada, (Longman Group: UK Ltd., 1993), p.127.

<sup>39</sup> OECD, Main Science and Technology Indicators (1990:2), p. 29.