

country is assumed to ignore foreign retaliation of its actions. Consumption patterns in this country are assumed to be similar to those of the rest of the world. The analysis considers only run-of-the-mill process innovations. Product markets are assumed to be competitive. BK analyze the implications on the optimal patent term of both monopoly and competition in the innovation industry, the latter being the more realistic situation in a trading country. The following cases can be distinguished.

Case 1: Many inventors in a competitive international market.

Taking Canada as a small trading economy, BK assume a perfectly competitive market. Net social benefits to Canada from the patent system, under these assumptions, consist of (a) benefits to producers between the expiration of the patent in Canada and its expiration in other countries, and (b) net benefits to consumers after that. Private benefits to innovators, whether Canadian or foreign, are irrelevant in the BK model because competition among innovators dissipates the entire appropriable rents. Spillovers from innovations are not part of the analysis.

In this case, with many inventors racing to obtain patent rights, the BK theory holds that *it is beneficial for Canada to provide very little or no patent protection*. Given that there is patent protection in the rest of the world, and private benefits to innovators are ignored, a patent regime in a small economy has no effect on incentives to do R&D in that economy. Even very large countries will find it profitable not to have a patent system.

Case 2: One inventor in a competitive international market.

In this case, the monopolist inventor is able to appropriate rents in the product market by owning the patent. BK assume that multinationals register patents in the name of the head office, regardless of the location of the R&D or the innovation. Again, spillover effects of innovations are ignored. However, the optimal patent life depends on the ownership of the innovations.

● **Invention occurs in Canada and is owned by Canadians.**

Consider, for instance, that Northern Telecom invents a new switching system and applies for a patent in Canada. In this case, the BK model suggests that no matter what the patent term happens to be in other countries, *it is beneficial for Canada to have a patent term that is longer than in other countries*. Canada's share of the market for the switching system will increase and R&D in this sector where we have clear expertise will be further stimulated as the patent term is increased.