

benefits of exports.<sup>4</sup> Similar rationales for exports could be detected in the policies of lesser producers such as Italy, Sweden, and Canada. As the costs of producing high-technology weapons increased for small states with limited internal demand, the pressure for exports increased.

According to Mr. Killick, senior vice-president of Canadian Marconi Company and a former Assistant Deputy Minister (Materiel) for the Canadian Armed Forces, a state like Canada had two motives for trading arms. These were the high technology and commercial spinoffs that result from research and development in the defence sector, and the employment that was created. The high-tech spin-offs often rapidly evolved into consumer products. On the employment side, not only were jobs on the production line preserved, but skilled personnel and research teams were also kept in Canada, preventing a "brain drain."

Both of these propositions were difficult to prove with numbers, said Mr. Killick. Although the benefits were sometimes unclear or ambiguous, the net gain was still positive on both these accounts.

### Discussion and Questions

This was a controversial position and it was attacked in many of the questions that came from the floor. One questioner pointed out that the issue was *not* whether or not there were civilian benefits or spin-offs from military research and development activities, but whether or not these benefits would be greater if the same amount of research money was spent in the civilian sector. The questioner argued that although there were always some spin-offs from military research and development, the same amount of money spent in the civilian sector would produce *greater* employment and spin-offs.

Mr. Smith also pointed out that since the defence industry was capital intensive, military spending produced fewer jobs than could be created in other sectors. According to Mr. Smith, most of the studies on this demonstrated that a reduction in spending in the military sector would release resources for other applications. This view was also held by a questioner in a later session, who pointed out that studies suggested increased military expenditures "crowded out" investment and had a negative impact on economic growth.

This issue was taken somewhat further by Mr. Smith, who expressed the view that what needed to be examined was the issue of

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<sup>4</sup>Economies of scale are realized in two ways. First, the average cost of producing each tank, for example, declines as the total number of tanks produced increases. Second, the research and development costs of designing the tank are spread over a greater number of units.