

MANAGING DEFENSE INNOVATION THROUGH CONSTRAINED BUDGETS

Renaud BELLAIS
École Spéciale Militaire de St Cyr Coëtquidan
EADS Political Affairs France

Technological superiority is a key element to achieve efficient defence, and defence R&D plays a major role in order to reach the adequate technology advancement. However the management of defence R&D is far from perfect. One can easily identify, through the literature, some difficulties like:

- The "return into investment" is quite low for defence R&D, therefore one can try to improve the management of such budgets;
- Defence stakeholders are not always able to catch technology breakthroughs while this is a crucial target for advanced countries, therefore one can ask for alternative approaches.

Moreover, since the end of the Cold War, R&D budgets in Europe are not high enough in regard to both investment needs and the evolution of technology intensiveness in defence. Indeed there is a structural gap between the requested level of investment and the available budgets. This problem is amplified by the existence of threshold effects resulting of the evolution of defence-related technologies (Setter and Tishler, 2005).

It is very unlikely that the European budgets of defence R&D increase steadily in the forthcoming years. It is then necessary to find a new approach in order to leverage current budgets to catch the American push towards defence innovation and overcome the current lack of cooperation in defence R&D. For instance, less than 8 percent of all defence R&T spending is realized jointly between European countries.

An alternative approach is also required since today's approach is unfitted with disruptive technologies. Indeed interactions between the MoD and incumbent firms are able to plan technological developments when a given technology needs to be improved or is identified as an emerging source of strategic superiority. It is not necessarily the case for very new or disruptive technologies.

One solution could be to rely on the core mechanisms that make venture capital successful. Its portfolio approach can indeed help peak up several promising fields without selecting one "too early" or rejecting a potential technology only because of the rational allocation of credits (Cowan and Foray, 1995).

This paper therefore proposes to present a research agenda on the possible implementation of venture capital-like mechanisms to defence R&T as a means to maximize the results of defence R&T while keeping the social cost of defence innovation at a reasonable level.