Chapter 12

Decision Support for Optimal Use of Joint Training Funds in the Canadian Armed Forces

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ABSTRACT

Joint exercises are vital to the Canadian Armed Forces (CAF) meeting its readiness targets. However, CAF resources are often insufficient to participate in all candidate joint exercises. Many organizations face resource challenges. In the context of preparing the CAF for its mandated missions and operational tasks, this chapter addresses the following research question: How can the CAF get the most value out of its joint training resources? Using strategic analysis and operations research, the authors designed a value model to gauge a joint exercise’s value and an optimization model to support decision makers when selecting a joint exercise portfolio. This chapter describes these models, presents an example of their application, and discusses future improvements.

INTRODUCTION

Governments must spend taxpayer money efficiently while delivering effective results for their citizens. It can be challenging to optimize spending in government processes even when the desired results or outcomes are relatively clear (e.g., the number of passports printed or tax returns processed). However, this becomes more difficult when the objective cannot be so easily quantified. This is commonly the case when attempting to measure or assess how prepared a military is to meet government policy objectives and, by extension, execute its mandated missions and operational tasks. In short, how does one ensure...
the optimal military readiness within available resources, aligned to government policy direction and tailored to the specific demands of the operational environment?

Within the Canadian Armed Forces (CAF), military readiness is achieved, in part, through conducting joint exercises that simulate missions and operations for which the CAF has been directed to prepare. The Commanders of the Royal Canadian Air Force, Royal Canadian Navy, and Canadian Army are the functional authorities for their respective (air, sea and land) force elements and, as such, are responsible for bringing these elements to specified readiness standards as set out in higher level direction issued by the Chief of the Defence Staff (CDS). In turn, the CAF’s Joint Training Authority (JTA) is responsible for developing a joint training program, including a plan for joint exercises, which takes the service force elements through joint training to achieve an expected level of joint readiness.¹ Given this responsibility, the JTA produces a Joint Managed Readiness Program (JMRP) that provides policy and guidance on the conduct of joint readiness training. It also describes specific activities that are planned to occur over a five-year period, where the first three years include detailed instructions on specific training objectives and exercises, and the remaining two years are described in more general terms of intent. The JMRP sets forth the overarching principles that must guide the development of the joint readiness program, including

- A focus on readiness to support contingency plans;
- An emphasis on critical capabilities (cyber, space, information operations, etc.) and joint enablers (command and control, communications and information systems, operational support);
- A series of integrated activities that achieve an enhanced state of joint readiness;
- A concentration on force elements that need to be integrated as detailed in CDS direction;
- A requirement that global engagement opportunities with partners and allies are taken into account; and
- A plan to validate force element readiness against the CAF Joint Task List – a ‘menu’ of tasks, described in a common language that, amongst other things, enable standards to be applied to joint training.

Developing a readiness program that respects these principles, while simultaneously not exceeding the financial constraints imposed by the Joint Exercise Training Allocation (JETA) – the JMRP’s primary funding source – is not a straightforward procedure. Historically, the program’s development and refinement occurred through collaborative discussions between JTA staff, exercise planners and subject matter experts. This has proven to be resource intensive, in terms of time and effort. There are three reasons for this. First, the number of candidate exercises to be considered in each year is on the order of 50 to 100, which makes the set of potential exercise portfolios too large to consider in detail without the assistance of decision support. Second, the cumulative fiscal demands of the candidate joint exercises in any given year far exceed the annual JETA funding, which is typically on the order of $CAN30-50 million. Lastly, the lack of defined criteria to assess the value of an exercise to the CAF makes it difficult to determine the opportunity cost of including/excluding an exercise in the program.

Given these challenges, JTA staff requested that the authors design and implement a transparent, repeatable, evidence-based approach to support the development and refinement of a five-year rolling exercise program consistent with government policy and the readiness direction issued by the CDS. In addition to these requirements, the JTA stipulated that certain constraints be respected (Pall, Rempel & Roi, 2017):