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PROCUREMENT CHALLENGES FOR THE NEW GOVERNMENT:

Assessing Liberal Defence Promises

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Introduction

The election of a Liberal government under Prime Minister Justin Trudeau means that greater attention should now be paid to the party's electoral promises on defence, especially their pledge to withdraw from the F-35 fighter aircraft program and reinvest in naval recapitalization. This plan complements a second pillar of the Liberal defence platform – to undertake a renewed effort at 'transformation,' meant to find cost-savings by reducing headquarter staff and administrative overhead (tail) in favour of operational capabilities (teeth).

Clearly, the Liberal Party defence plank was political, meant to showcase their bonafides on defence matters while refocusing attention on what many see as the Conservative's problematic F-35 program. Importantly, it was also designed to address a very real defence procurement problem – namely, a 'force structure-funding gap.' Simply put, Canada faces a large and expanding budgetary gap, estimated by the Parliamentary Budget Officer (PBO) to be between C$33-42 billion.[1]

This gap must be addressed if the government hopes to recapitalize the Canadian Armed Forces (CAF), maintain the current force structure, and ensure defence sustainability. This paper will explore some of the short- and long-term challenges currently facing the CAF, from capability gaps to recapitalization, and assess some of the Liberal promises to fix these problems. It concludes with some thoughts on the need to recalibrate defence resource allocations.

Short-Term Challenges: Capability Gaps and Readiness

Any assessment of this force structure-funding gap should first recognize the procurement successes in recent years. Despite its numerous delays and false starts, Canada did finally take possession of an initial tranche of CH-148 Cyclone maritime helicopters, with software upgrades and additional aircraft on the way. The Royal Canadian Air Force (RCAF) will also benefit from a modernized fleet of Auroras with greatly improved sensors and ISR capabilities, even if it comes at the cost of procuring new aircraft like the costly P-3 Orion. Meanwhile, the CF-18s are in the process of additional upgrades, which will allow these planes to continue operating until 2025 and offers some breathing space for the country's controversial fighter replacement program.

True, the Royal Canadian Navy (RCN) has seen its fleet reduced by four ships in recent years, due to the decommissioning of two Protecteur-class auxiliary oiler replenishment (AOR) vessels and two Iroquois-class destroyers, with only the destroyer HMCS Athabaskan expected to be operational, albeit only until 2017.

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Yet, even here, the news is not all bad. Canada's Halifax-class frigates are undergoing the C$3.5 billion modernization and life-extension project (HCM/FELEX), which will provide advanced command and control (C2) capabilities, as well as new radars and weapon system upgrades – from Advanced Harpoon Weapon Control System, with GPS-guided Harpoon Block II anti-ship missiles, to the high-speed and maneuverable RIM-162 Evolved Sea Sparrow Missile (ESSM), upgradeable to the Block II variant, owing to Canada's involve-ment on the multinational ESSM consortium.[2]

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The loss of the RCN's two AORs represents a more serious capability gap, since these vessels provide the logistics necessary for the blue-water RCN fleet to undertake sustained operations abroad. Yet the government was quick to temporarily fill this gap, by opting for a modified commercial container ship (the *Asterix*) to be leased from Chantier Davie Canada.[3] This ship will be used as an interim solution until the arrival of the two Queenston-class Joint Support Ships (JSS), expected by the end of the decade. In the meantime, the RCN has secured access to Spanish and Chilean supply ships for its east and west coast fleets, and is coordinating its ship deployments with US Navy supply ships.

These measures might not be perfect; a point defence system is not the same as the Iroquois' longer-range area defence system, and a leased supply vessel cannot be equated with an independent at-sea replenishment capability. But, in the short-term, the RCN is unlikely to face any insurmountable capability gaps in its forces-in-being.

Of more immediate concern is ship availability. Due to the HCM/FELEX project, the RCN only has six frigates currently available for operations – with three ships undergoing sea trials, and three more being (or soon to be) refitted.[4] Canada will also have to settle for only one (leased) supply ship until the first JSS is ready by 2020, although the fact that three of Canada's long-range, high endurance submarines are now finally operational does partly mitigate this problem. Another issue is operational readiness, in so far as recent efforts at deficit reduction have disproportionately affected CAF's operations and maintenance budget, resulting in Army brigades with less money for ammunition or training exercises, RCN ships with fewer maintenance staff and combat training opportunities, and parts and maintenance backlogs for the RCAF.[5]

Long-Term Challenges: Procurement and Fleet-Replacement

One should not discount some of the problems facing the CAF's current forces-in-being, not least platform availability and readiness. But the real challenge only comes into focus when you look at the future force, especially as it pertains to capital investment in future capabilities.[6] Indeed, recent successes have been primarily aimed at modernizing and extending the life of existing platforms rather than fleet-replacement per se – a requirement likely all the more necessary due to the delays afflicting key procurement projects.

For example, the government originally announced the decision to procure the Arctic Offshore Patrol Ships (AOPS) in 2007, with the first ship arriving in 2013 – a date pushed back five years to 2018. Given prioritization on AOPS procurement, the Canadian Surface Combatant (CSC) will likely only arrive by 2025, or more than a decade after its initial 2015 projection in the Canada First Defence Strategy (CFDS). The Queenston-class JSS, first announced by Paul Martin's government, was originally expected to be delivered by 2013. But this project has been delayed for several more years until 2019-2020.

While disproportionately affecting the RCN, they are certainly not alone in facing such delays. One only need to look at the CF-18 fighter aircraft replacement, which was initially meant to have the aircraft (the F-35) delivered by 2016, later pushed back to at least 2025. It can even be seen in the Canadian Army's Close Combat Vehicle project, which was delayed by a few years prior to its cancellation in 2013.[7]

These procurement delays have had a deleterious impact on the capital budget itself – a problem that comes down to defence inflation, which the CFDS annual 2 percent "escalator" never adequately addressed. After all, defence inflation rates are actually much higher, and upwards of 11 percent for navy ships.[8] Procurement delays only further compound this problem. Budgeted funds are pegged to particular years, and this amount is not increased even when delays in procurement projects or inability to spend earmarked capital funds lead to the re-profiling of money to later years. As a result, the CAF's capital budget has been steadily reduced in purchasing power – a reduction only magnified by the steadily declining Canadian dollar, which will increase the cost of both fighter aircraft and key weapon systems used on our surface ships.[9]

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Even before procurement delays and purchasing power decline, observers questioned whether the CFDS's capital funding promise – totalling only 12 percent – was ever really sufficient.[10] Many often refer to 23 percent as being required for recapitalization.[11]

Barring an increase in the capital budget, the outcome will inevitably be a reduced number of platforms and/or a reduction in the capabilities of the platforms. A good case in point is the JSS. Initial plans were for 3 ships with a steadily expanding number of capability requirements, including sealift and on-shore support. Yet the project's initial C$2.9 billion acquisition budget proved insufficient for these hybrid ships, as the government discovered when the initial bids were substantially over-budget. Now, with a current budget of C$2.6 billion, the number of ships has been reduced to two, additional capabilities have been trimmed, and the resultant design – based on Germany's Berlin-class vessels – making them effective AOR+. The possibility of a third ship was retained, but few see that as realistic or feasible.

A similar outcome is likely with other naval projects. The AOPS had an acquisition budget of $3.1 billion, which grew in early 2015 to C$3.5 billion. Yet, even with this increase, the number of envisioned ships has steadily decline – from upwards of eight to now only five, with some of the vessel's capabilities (e.g., speed) pared down.[12] There is a possibility of a sixth ship being constructed, but even this is not guaranteed; the example of the JSS makes it hard to be optimistic.

Meanwhile, the CSC's acquisition budget of C$26.2 billion earmarked to procure 15 ships. As the Auditor General noted in 2013, this budget was first made in 2008 and has yet to be revised to take into account the increasing "costs of raw materials, labour, and military components for the ships."[13] Unlike the JSS or AOPS, the size of the CSC fleet has not be reduced, nor their capabilities officially trimmed. But, only last month, then Defence Minister Jason Kenney provided the first indication the number of CSCs could be as low as 11. And there has been discussions about possibly re-using systems from the RCN's existing fleet in the CSC.[14] Some even say that the total cost of the CSC alone could be as much as C$40 billion – or more than the funds allocated to the entire National Shipbuilding Procurement Strategy.[15]

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A similar problem also afflicted the Conservative government's original plan to acquire the F-35 at a project acquisition cost of C$9 billion. The government's 2010 announcement led to a significant debate on the aircraft's capabilities and its cost, especially if one includes support and maintenance costs and uncertainty about the F-35's actual per unit flyaway cost – a point highlighted in the 2011 PBO report.[16] With plans to only acquire 65 aircraft, Canada had very little leeway in reducing the total number of aircraft. A significant reduction of its fighter fleet would raise questions as to whether Canada can maintain its existing domestic and continental airspace commitment, to say nothing of expeditionary deployments abroad

Liberal Promise on F-35s and Transformation: Too Little, Too Late?

The Liberals should at least be commended for recognizing the current unsustainability facing the defence budget, especially as it concerns the large naval procurement projects currently underway or on the horizon. Without an increase in capital funds, the number of naval platforms and their capabilities will inevitably decline; a return to the 'shaving of the ice cube' that has become an unfortunate leitmotif of Canadian defence procurement over the years. However, the Liberal solution to this challenge – relying as it does on finding cost-savings or efficiencies within the existing budget in order to buttress naval capital renewal – does require further scrutiny.

First, the new government hopes to alter the tooth-to-tail ratio within National Defence in favour of the former. This is largely in accordance to then Lieutenant-General Andrew Leslie's *2011 Report on Transformation*. Yet the previous government had already moved part way to implement some of its recommendations, such as the decision to amalgamate various operational commands into a Canadian Joint Operations Command in 2012.

Soon thereafter, DND stood up a Defence Renewal Team to focus on creating a "lean and efficient organization" in order to free up funds to reinvest in "operational capabilities and readiness."[17]

To be sure, this effort cannot necessarily be equated with Leslie's vision of transformation, which had imagined a more fundamental and transformative reorganization to allow for the reinvestment of 3,500 Regular Forces personnel (and an equal number of civil servants) and C$1 billion annually.[18] Defence Renewal is a more modest initiative; no positions will be eliminated, and realistically only C$528-$845 million will be freed up, as well as 2,362-3,741 full-time positions, which is significantly less than what initiative promises.[19]

However, even with less sweeping and more modest goals, the Defence Renewal process has proven a less than fruitful endeavour, saving only C$158 million by the end of the 2015 fiscal year.[20] This fact alone raises serious questions on the extent to which there is "low-hanging fruit" that could really be harvested to generate the savings envisioned in the Defence Renewal initiative, to say nothing about Leslie's more ambitious transformation proposal.[21] This does not mean that a more fundamental reorganization, as envisioned by Leslie, might not generate the envisioned administrative efficiencies. But it is by no means guaranteed, and the consequences of such major reorganization remains equally uncertain.

But, even if transformation is fully and successfully implemented, the promised savings would not necessarily be adequate to offset the capital shortfalls facing the CAF. After all, the report was written prior to the government's deficit reduction efforts and operating budget freeze, as well as the loss of purchasing power that undermines the entire recapitalization effort. Simply put, the administrative efficiencies that could potentially be generated by transformation is uncertain, and likely insufficient to deal with the problem at hand.

Second, in addition to administrative efficiencies, the Liberal government also sees cancelling Canada's involvement in the F-35 program as another potential means to generate savings that could be reinvested in naval renewal. Questions can certainly be raised about this promise on a number of levels.

For one, the Liberals promise an open competition for Canada's next fighter aircraft, while at the same time precluding the "purchase [of] the F-35 stealth fighter-bomber"[22] and offering up the counter-example on the benefits of the Super Hornet – thereby raising the question on how open any such procurement process can be. They also state the need for a defence review leading to a White Paper. Yet, long before such a process, they are also quick to reject the requirements for the F-35's "first-strike stealth capabilities," emphasizing instead the priority for continental air defence in which requirements for low-observable technology are much less pressing. In that manner, they seem to put the 'cart before the horse,' in so far as any such conclusion – even if accurate – should more properly arise from a full defence review.

It is easy to see why the Liberals would choose to focus on the F-35, given the controversy over its program mismanagement, uncertainty over its capabilities, and close association of the project with the previous Conservative government. I will not go into detail on the merits of the F-35. Suffice to say, critics of the aircraft are overly quick to disparage the platform's capabilities, especially its advanced sensors, network connectivity, and situational awareness, although proponents themselves sometimes seem too eager to raise the spectre that less capable aircraft would result in "severe consequences,"[23] whether in terms of North American defence or our ability to operate with allies abroad.

Yet, more important for assessing the Liberal's plan is the question of the F-35's cost. The Liberal platform does not spell out in detail what could be saved and reinvested into the RCN's capital. It does state that the fly-away costs for the F-35 is C$175 million, compared to the F/A-18E Super Hornet's much more reasonable price of C$65 million. But these figures also misrepresent the real difference in cost between the two aircraft.

For instance, compared to the misplaced optimism of the past, the F-35A has in recent years shown much greater stability in its fly-away cost projections and production numbers, as shown in successive US Air Force (USAF) defence budget requests from FY2013 to FY2016.[24] These figures show a consensus that F-35A production rates will indeed ramp up by the end of the decade, just in time for Canada's acquisition requirements. By 2020, the USAF FY2016 budget request shows a drop of the unit flyaway cost to US$91.4 million (2020 dollars), or US$100 million (2020 dollars) if one includes simulators, training equipment, and other support costs.[25]

Additional savings could also be realized under the "Blueprint for Affordability," which has seen Lockheed Martin, Northrop Grumman and BAE Systems investment millions in order to streamline and achieve cost-savings in the F-35 production line.[26] With actual prices less than planned in recent years,[27] Canada could pay even less than the USAF budgeted amount – perhaps even the US$80 million flyaway cost that Lockheed Martin had hoped to achieve by 2019.[28]

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In comparison, the F/A-18E Super Hornet was last purchased by the US Navy in 2013. In its FY2013 budget request, the aircraft has a listed flyaway cost of US$65 million (2013 dollars), and US$80 million (2013 dollars) with support costs.[29] A Foreign Military Sales (FMS) charge would add an additional US$5 million per aircraft.[30] Alongside several years of inflation, the Super Hornet would have a flyaway cost of $80 million (2020 dollars) and US$97 million (2020 dollars) with support costs, the latter figure being roughly comparable to the F-35. Moreover, just as F-35 production begins to ramp up, the Super Hornet will face rapidly declining production numbers that will likely increase its price even further, assuming the production lines are even open at that point.

As a result, the flyaway cost difference between both aircraft is minimal – and indeed negligible if one is hoping to achieve cost-savings sufficient to substantially reinvest in naval capital renewal (or, alternatively, if they hope to acquire additional aircraft beyond the envisioned 65 F-35s).

Equally uncertain is the cost differential in terms of operations and sustainment. Boeing claims a cost of US$16,000 per flight hour for the Super Hornet, compared to the F-35's US$31,000. Yet things here are also not so clear cut. Australia has been operating the Super Hornet for several years, and it has found the operating cost to be closer to US$24,000 – a fact that likely arises from the F/A-18E's lack of fuel efficiency and the small size of the Australian fleet (compared to the US Navy), according to a 2012 study by IHS Jane's Aerospace and Defense Consulting.[31] In the same study, it notes that the Royal Australian Air Forces estimates the F-35A to have an expected cost of US$21,000 per flight hour – a figure close to the US$24,000 claimed by the Pentagon.[32] Similar per flight hour costs for Australia's Super Hornets and its projections for the F-35A, with both aircraft having comparable acquisition costs, seems to support the view that these types of costs are tightly coupled; both costs are "driven by system complexity."[33]

What all this means is that the Liberal government will unlikely find much in the way of savings by opting for the Super Hornet instead of the F-35 – or indeed other aircraft (Typhoon, Gripen, Rafale) that are often just as expensive. A renewed effort at transformation offers additional avenues for cost-savings, but the success of such a process is uncertain. At the very least, it would likely prove difficult (and politically contentious) to implement, and could lead to unforeseen and negative consequences.

Conclusion: Recalibrating Defence Resource Allocations

Absent a significant increase in resources, more fundamental and indeed drastic measures will be needed to overcome the inextricable and mounting pressure on the CAF's force structure and fleet-replacement plans.

One possibility is to look at reallocating scarce defence resources through a reduction in the size of the Regular Forces. The Conservative government was keen to expand Regular Forces levels to 70,000, and did succeed in increasing force levels by 6,500 to 68,000 over its tenure. Yet, partly as a result, personnel costs make up a disproportionately large portion of the defence budget at roughly 50 percent. In contrast, capital spending had fallen to a modest 14 percent of the budget by 2012-2013.[34] Owing to this budgetary disparity, a relatively small reduction in manpower levels could result in a significant increase in how the CAF equips its future forces.[35] This fact underlines why even former CDS General Rick Hillier (Ret'd) has called for a 50,000-strong Regular Force.[36]

Admittedly, this would have a disproportionate impact on manpower intensive services like the Army, much as the Liberal plan would affect the RCAF. At least in this scenario, more expansive savings could be accrued – and force regeneration for Canadian ground forces is always a possibility at a later date. Simply put, "ground forces can be regenerated faster than advanced technological systems can be developed and fielded."[37] Such a proposal represents a more radical departure from the *2011 Report on Transformation*, which had only recommended demobilizing Reservists. Rather than recalibrating the tooth-to-tail ratio, it would look at ways in which the tooth itself could be sharpened.

Another solution is to look at shrinking the CAF's basing infrastructure. Transformation was largely about administrative efficiencies, which would have an impact on infrastructure oversight and how bases function. But the report largely eschewed the subject of base closures – a point reiterated by Leslie in his Senate testimony.[38] The CFDS's own spending plans envisioned an increase in infrastructure spending, which would represent a sizable 8 percent of the plan's envisioned funding envelope – funds that would be used to maintain DND's 21,000 buildings or bases that do not even house operational units. As Eric Lerhe notes, allies like the United States and UK spend a much smaller percentage on infrastructure. The same can be said of Australia and Netherlands, while countries like France are moving to reduce their base infrastructure.[39]

In an ideal world, the government would simply increase defence spending in order to overcome the CAF's long-term procurement challenge. Yet such an outcome seems highly unlikely, especially for a new Liberal government that has already made a number of other electoral spending promises. Without it, the government needs to look at ways it could better use the current defence budget. Yet its solution is unlikely to be sufficient to solve this problem. More radical measures will likely be required to achieve 'more bang for their buck,' at least at a time of a constrained defence budget. At the very least, it would behoove the new government to examine the wisdom of reallocating resources from manpower and basing infrastructure, and reinvesting any such savings in capital, in their promised defence review.

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Views expressed here are those of the authors and do not necessarily reflect those of the CDA Institute.

Notes

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