Chapter 5

In Search of a Strategy: The Evolution of Canadian Defence Industrial and Regional Benefits Policy

James Fergusson
Research Associate
Centre for Defence and Security Studies
University of Manitoba, Canada

5.1 Introduction

Arguably, the practice of seeking industrial offsets is most pronounced in the case of defence purchases. For the majority of nations, defence purchases generally represent the largest proportion of capital or industrial goods bought by governments. As a result, these procurement decisions have significant economic, political, and social implications. In addition, industrial offsets are also driven by national security considerations. States seek to maintain, in varying degrees, a viable defence industrial capacity as a means to avoid dependence on foreign sources which could have significant implications during times of war. Although the practice of obtaining industrial offsets is generally viewed negatively from a economic efficiency perspective, because it promotes the inefficient allocation of resources, undermines industrial competitiveness and productivity, and distorts trade, the combination of political, economic, social, and security considerations makes states willing to absorb these inefficiencies.

In the case of Canada, its defence industrial offsets policy and behaviour can be understood largely in terms of the constant interaction between economic and political considerations; considerations which, in the Canadian case, are embraced by the ideas of Industrial and Regional benefits. Moreover, security considerations, which have at least been an important factor for many states in defence-industrial policy deliberations, are notably absent in the Canadian case. Of course, National Defence identifies and sets the requirements for capital acquisitions, and it is the lead department. Nonetheless, the specific decisions with regard to capital purchases in terms of the ordering of priorities, product selection, and contract requirements are based in many cases on other considerations and the input of other departments and agencies within the government. The net result has not only meant the inefficient allocation of limited defence resources, but also inefficient and inconsistent offset decisions which attempt to

seek some form of balance between economic and political requirements. In other words, Canadian defence offset policy has consistently reflected the competition and conflict between Industrial and Regional Benefits (IRBs).

In order to understand this competition and conflict, and the relative neglect of security considerations, the relatively unique Canadian political context as it relates to defence is paramount. This context provides the setting for examining the evolution of Canadian policy, and the attempt by the Canadian government in 1985 to reform its IRB policies. These reforms, it can be argued, played a significant role in the development of current offset policy in general, and the cancelled EH-101 Shipbourne Helicopter offset package in particular. Whether this package would have been successful can not be gauged, but it is evident that the decision will significantly affect the capabilities of Canada's Armed Forces and future capital decisions. Thus, the cancellation serves as a useful indicator of the underlying structural and political impediments to the development of a successful long term defence offset strategy.

Before undertaking this analysis, it is important to identify briefly the significant impediments to research in this area. By their nature, offsets policies and decisions reside in a politically charged atmosphere. Ranging from concerns about the political fallout in Canada of the regional distribution of offset contracts, the economic inefficiencies of such decisions, the relationship between government and business, inter-bureaucratic rivalry, to the violation of the spirit, if not intent of the defence industrial relationship with the United States, government and industry are reluctant to discuss openly Canadian offset policy. In fact, Canadian officials are loath to use the term offset to describe contractual Canadian content in off-shore purchases, and will clearly state that Canada does not have an offset policy. Instead, they are described as Industrial and Regional Benefits.

5.2 The Canadian Context

The dominance of domestic economic and political considerations in Canadian defence capital spending, to the relative neglect of security or strategic military factors, is fundamentally a function of the defence climate in Canada. Although it is somewhat a misnomer to argue that Canada has an **amilitary** society,[1] it is evident that the salience of defence issues in Canada is extremely low. Moreover, political isolationism, which is generally seen as a unique American phenomenon, was Canadian policy during the Interwar years and isolationism remained, as it did in the United States, a latent force in Canada throughout the Cold War. With the end of the Cold War, a return to isolationism is a distinct

possibility, despite Canada's post-World War II internationalist focus. As many observers point out, Canada faces no clear military threat to its security. Furthermore, there exists an underlying, albeit reluctant, acceptance that the United States will defend Canada against any foreign threat. Dwarfed by the United States and its military capability, unconsciously an atmosphere of "free riding" has existed, reinforced by a belief that Canada's contribution to collective defence would always be marginal and symbolic, regardless of the effort. If anything, this belief, in relation to Canada's current geopolitical situation and the underlying fiscal and constitutional issues facing the nation, has been reinforced with the end of the Cold War.

Even during the Cold War, support for defence was low as evident in the linear decline in the size of Canada's Armed Forces and Canadian defence spending since the end of World War II.[2] For the political elite, defence considerations have been driven by a set of foreign and domestic policy considerations. In terms of foreign policy, defence was seen as the *price to be paid* to obtain influence and a seat at the table. This, in part, reflected beliefs about Canada's role in the international system which developed in the post war years during the so-called "Golden Age of Canadian Internationalism", and the dilemma of being a neighbour to the world's superpower. From the former, the Canadian psyche institutionalized a set of roles of a benign nation acting for the greater good and eschewing force as a national option. From the latter, Canadian elites sought to avoid the dependency of a bilateral relationship by subsuming the United States in multilateral institutions of which NATO and the United Nations were central. In both cases, defence and the role of the armed forces inherently drifted away from strategic-military considerations to foreign policy ones.

Domestically, defence on its own terms has had little, if any, political payoffs for elites. With the notable exception of the 1962 federal election,[3] defence issues have played no significant role. There is also no significant constituency in Canada which supports defence. Finally, the relative insignificance of defence issues in Canada is reflected in the status of the Minister of National Defence. It is a junior post, and although defence represents a significant area of government spending, the Minister rarely sits on the key Cabinet Planning and Priorities Committee.

The impact of this political reality is manifested in the complexity of the Canadian system. Although the Department of National Defence (DND) sets the primary capital requirements, specific procurement decisions involve several other departments. The Department of Industry, Science, and Technology (DIST) is tasked with the IRB element itself, and, in conjunction with regional agencies, with reviewing, evaluating and advising on industry proposals and final selection.[4] The Department of Foreign Affairs and International Trade

(DFAIT) is involved through its mandate on foreign relations and export policy. The Department of Supply and Services (DSS) is tasked with the issuing of tenders, contracts, and contract management. Treasury Board has the authority to approve all procurement expenditures. Above all of them is the Cabinet which is not reluctant to intervene in the process, if not circumvent it through "demand purchases". Cabinet, through the Committee on Foreign and Defence Policy, must recommend all major procurement.

These factors in combination set the context for Canadian defence policy, spending, and capital procurement. Although defence considerations set the basic criteria for force capital requirements, specific decisions with regards to the purchase of capital goods to meet these requirements have been driven by political-economic considerations. For the political elite in Canada, capital spending in defence is perceived as a major vehicle for promoting a variety of non-defence interests. It represents the largest single area of discretionary spending available to the federal government. As a result, capital spending is used to promote political interests and support a wide range of socio-economic interests in the areas of industrial and regional development. Politically, spending is used as a means to funnel federal dollars into key political regions and ridings. Industrially, capital spending is used to support the establishment of new industries, sustain existing industry, and enhance Canada's industrial competitiveness. Regionally, defence capital dollars are a means to re-direct federal monies to disadvantaged areas. In other words, defence capital spending may be conceived as the centrepiece of an "industrial strategy" and Canada's IRBs policy perhaps meets this conception, notwithstanding the various factors which run contrary to the efficient implementation of such a strategy.[5]

The appearance and evolution of Canadian defence offset policy is also a function of nature of Canada's defence industrial capacity. Unable to support a full-scale integrated defence industrial base because of the small size of the Canadian market and the inability to compete internationally in all areas of defence production against the larger spenders and consumers, Canada's defence industrial capacity evolved in the context of a unique relationship with the United States. Through the Defence Production Sharing Arrangements (DPSA), Canada agreed to purchase integrated weapons platforms from the United States in return for privileged access to the American defence market. Notwithstanding certain legislative, administrative, and psychological barriers, Canadian firms are treated as American firms in Department of Defense (DOD) procurement.[6] As a result of this relationship, Canada's defence industry evolved towards specialization in the second and third tier of defence production, and in the process, established a variety of relationships with American producers. Thus today, Canada's defence industry primarily consists of sub-system and component pro-

ducers in a variety of high technology niches concentrated in the electronics and aerospace sectors.

While Canada has benefited greatly through its unique defence industrial relationship with the United States, Canada has faced a significant dilemma. Unable to support an independent full scale defence industry at a reasonable cost, Canada was forced to recognize that substantial amounts of capital spending would flow outside its border. In the 1963 follow on agreement of the DPSA, both parties pledged to maintain a rough balance in defence trade. However, since the end of the Vietnam War, Canada has faced an annual deficit in defence trade with the United States.[7] In fact, the first deficit in 1972, after five years of Canadian surpluses, was followed closely by a policy to seek offsets in defence purchases.[8] Whether this shift from a surplus to a deficit position had an independent impact on the Canadian decision to institute a defence offset policy is unknown. It is possible that in conjunction with the Defence Structure Review of 1975, which set in place the foundation for the major procurement projects of the next decade, Canada's defence industry had by the mid-1970s lost the capacity to undertake licensed production such as occurred in the 1960s. Regardless, the 1970s mark the beginning of the formulation of Canada's search to obtain industrial and regional benefits in purchases from foreign manufacturers.

The search for industrial and regional benefits in offshore purchases is part of the wider process of Canadian defence procurement. As the case with most nations, Canadian procurement policies are biased towards supporting domestic interests in all departments and agencies. However, Canada does not have any legislative requirement on par with the "Buy American" Act which dictates preferences for Canadian suppliers. Moreover, Canadian policy is to promote competition and receive the best value for dollars spent. Finally, GATT provisions with regards to Government Procurement, the Free Trade Agreement (FTA) and the North American Free Trade Agreement (NAFTA) have also served to limit Canadian preferences and focus the search for domestic benefits in defence.

The DSS, through existing practice and its responsibility for Canada's defence industrial base (DIB), has in place a set of policies and procedures designed to favour domestic sources. In addition, the exclusion of defence from the GATT, the FTA, and the NAFTA has had the effect of focusing Canada's IRBs in the area of defence. Essentially, Canadian policy on selection is based on three considerations: technical performance; socio-economic benefits; and support for the DIB. In terms of the relationship between them, socio-economic factors are the decisive criteria for source selection as long as the bid meets the minimum technical requirements. This applies to contracts above the C$2 million threshold, including Major Crown Projects (MCPs) which exceed the C$100 million threshold. In the process of seeking competitive bids, preference

is given first to Canadian manufacturing firms, then Canadian firms acting as authorized agents of foreign firms, and, finally, foreign firms. In addition, a 10% premium is applied to the foreign content of the bids. In other words, although price competitiveness remains a central consideration, the Canadian content premium, which encompasses the wide range of domestic benefits to be accrued from procurement, alters the procurement environment in favour of Canadian firms and/or foreign firms willing to establish a production capacity in Canada or working relationships with Canadian firms. Finally, procurement is restricted to Canadian firms as long as at least two sources are available and one responds.

Of course, this latter condition rarely obtains for major capital or crown projects given the structure of Canada's DIB. Thus, competition for these projects, when it occurs, largely revolves around the ability of foreign firms to outbid competitors along the premium of Canadian content. Thus, given a range of technical equivalence in integrated weapons platforms, Canadian content becomes the fundamental criteria for choice. Moreover, the 10% Canadian content premium, ceteris paribus, can be considered a benchmark of the additional costs borne by DND in procurement; a cost which may compound the rigidities and increased costs of defence procurement in Canada as suppliers are unable to obtain needed goods from the most cost-effective sources due to offsets.

5.3 Stage One of Canada's Industrial and Regional Benefits

The first stage of Canada's IRB policy roughly covers the period 1975 to 1985, and concludes with the Nielsen Task Force Report on Government Procurement. During this period, Canadian policy can be best illustrated by three MCPs; the Leopard I Main Battle Tank (MBT), the P-3 Aurora Long Range Patrol Aircraft, and the CF-18 Hornet.[9] All three projects are common in the sense that they were proven designs in the production stage and in service. However, each project demonstrates distinct differences in both the motives for the purchases, the specific offset packages, and the benefits and costs of various approaches to offsets.

The purchase of the Leopard 1 MBT was motivated by the recognition of the obsolescence of Canada's existing MBT fleet of Centurions. At the time, the Leopard 1 was the newest MBT available, with both the American M-1 Abrams and the British Challenger in the design stage.[10] Regardless of this consideration, the decision cannot be divorced from wider political objectives of the Trudeau government to diversify Canadian trade away from dependence on the United States — the so-called Third Option.[11] The government sought a contractual link with the European Community which had, in turn, met with opposition from Canada's allies, particularly Germany, over Canada's unilateral decision to

reduce its military commitment to Europe by 50% in 1969.[12] Thus, the Leopard purchase had a significant political motive underlying it.

According to Todd, the contract with Krauss-Maffei entailed a commitment to offset 40% of the contract value of C$236 million through industrial benefits over a period of ten years.[13] The meeting of the offset requirement was, however, left open-ended. As result, only one Canadian firm, Vestshell of Montreal, participated in the project directly. The preponderance of the offset work amounted to basic casting manufacturing, and the purchase of raw materials including plywood and rapeseed; the latter goods being accounted with the blessing of the Canadian government through contracts with the Netherlands. Also, the majority of the benefits (75%) were directed towards Quebec and Ontario. As a result, Todd concludes that the Leopard I offset package failed to deliver significant industrial benefits and technology transfer to Canada.

Roughly at the same time of the Leopard purchase, Canada decided to purchase the P-3 Long Range Patrol Aircraft (LRPA) from Lockheed, designated the Aurora (Orion in the United States). According to Tucker, the decision was the result of an extended process in which a variety of factors were at play.[14] These included American pressures to reduce their balance of payments deficit with Canada and support financially troubled Lockheed, DND desires to procure a new Anti-Submarine Warfare Platform compatible with the United States Navy and Canada's naval role in NATO, the Department of Industry, Trade, and Commerce goal to support the Canadian aerospace industry, and the governments aspiration to maximize industrial benefits and procure a platform for sovereignty protection. The final decision to procure the P-3 from Lockheed was a function of the priority assigned to the industrial benefits package, followed by the ASW role which reflected the return of NATO as the priority in Canadian defence policy.

The offset package attached to the Aurora purchase was limited because the platform was already in production. There was little opportunity to obtain direct offsets in this area. Nonetheless, the package amounted to 100% offsets to be met over a fifteen year period.[15] Direct offsets were located in the Anti-Submarine Warfare (ASW) suite deployed on the platform; a pattern that would be repeated through the inter-relationship between the Canadian Patrol Frigate (CPF) programme and the aborted EH-101 project. The specific breakdown of direct to indirect offsets, or regional distribution can not be confirmed. Nonetheless, according to one source, Lockheed committed to $C414 million in Canadian subcontracts out of a total of $C1.2 billion, which may represent a direct offset proportion of 35%.[16]

The final MCP of this stage is the CF-18 Hornet purchase. This decision with regard to the offset package is perhaps the best documented of all of

Canada's offset purchases and became the central case of both the Auditor-General's Report of 1984 on defence and the 1985 Nielsen Task Force Report on Government Procurement. In contrast to both the Leopard I and P-3 Aurora, which were the most modern proven platforms in service for their respective primary roles,[17] the competition to replace the CF-101 Voodoo, the CF-104 Starfighter, and the operationally committed CF-5 appeared to benefit from the abundance of new state of the art fighters on the market. However, the limit placed on funding for the project and the minimum buy level effectively removed half of the competitors from serious consideration, including the preferred fighter, the F-15, of the Air Force. Moreover, a further competitor was eliminated as too risky because it was still in the developmental stage and no one had agreed to purchase it. The net result left only two serious competitors, the General Dynamics F-16 and McDonnell Douglas F-18. Even then, widespread support for the F-18 among the military largely removed any "true" degree of competition. In other words, given fiscal restraints, unproven technology, and military preferences, there was only one possible option for the government — the F-18.

Nonetheless, the public competition which did emerge between General Dynamics and McDonnell Douglas was fought on offset packages; a pattern evident as well in the fight between Lockheed and Boeing over the LRPA MCP. According to Boyd, the inclusion of the GD F-16 on the short list, with the F-18 as the military preference after the removal of the F-15 on cost grounds, was an attempt to pressure MD into improving its offset package.[18] The process became public in light of the two federal elections of the period and influenced by the state of relations between Ottawa and Quebec. The final decision was made possible by showing the Quebec caucus of the Liberal government that the McDonnell Douglas package would provide greater benefits to Quebec than the General Dynamics one.

The offset package itself amounted to 100%, which entailed $C2.453 billion in indirect offsets and $C.453 million in direct industrial participation.[19] There were some substantial benefits accrued by Canada through the CF-18 offset package.[20] It resulted in the creation of a new GE engine blade and veins plant in Bromont with a world product mandate which continues to rank among the top of the GE group. In addition, the CF-18 purchase resulted in significant export contracts to other countries which subsequently purchased the F-18. Nonetheless, the process through which the package was formulated and the overall IRBs accrued by Canada were roundly criticised.

The first major critique of the CF-18 purchase was the 1984 Auditor-General's Report. Although the report is relatively sketchy, it noted that the project lacked clearly defined objectives, regional considerations were largely

ignored in the negotiating phase, and there were problems with the offset approval proposal and reporting of benefit claims.[21] More damaging was the 1985 Nielsen Task Force Report. Specifically, the report argued that of the C$2.45 billion offset package, 57% consisted of work which would have been done in Canada regardless of the contract, and further (unspecified) amounts of the sub-contractor work was not caused, although claimed, by the contract itself. Finally, the majority of benefits were build-to-print short term work which translated into little technology transfer and long-term benefits. Also, the Task Force estimated that for the Aurora and CF-18 purchases, Canada absorbed at least C$125 million in additional costs associated with the offset package. Finally, although regional breakdowns are unavailable, according to the 1994–95 estimates, $C63 million of the indirect industrial benefits was targeted for the setting up of the aforementioned GE plant ($C60 million) and investing in UDT Industries in Quebec.[22] Otherwise, it would appear that the contractor was not contractually restricted on a regional basis; an inference consistent with the critiques of Canadian IRB policy in this period.

Overall, this brief survey of the three MCPs of this first stage illustrate a variety of important considerations. First of all, the three projects indicate a rejection of weapons platforms in the design or developmental stage. The state of the Canadian Armed Forces at the time, in conjunction with the political and fiscal constraints in Canadian defence policy and procurement, combined to dictate purchases of existing proven platforms. In so doing, however, opportunities to buy into the development phase and potentially reap technological and export benefits in the future were minimized. Rather, the purchase of existing proven platforms restricted the areas in which industrial benefits in general and direct benefits in particular could be realized. Moreover, the promise of technology transfer largely failed to materialize.

Second, the distinctions between the three projects imply the absence of any clear consistent set of offset policies relative to military requirements. Although in each case the military received an effective platform to replace its obsolete existing inventory, only the Aurora represented the preferred military choice, particularly in terms of Canada's military commitments. Moreover, this choice cannot be divorced from underlying economic considerations. Also, the decisions reflected a lack of consistency in Canadian defence policy itself. The Leopard I purchase, driven by wider political concerns with regard to Canada's relationship with Europe contradicted the policy emphasis to shift the role of the Canadian Army from a heavy armoured one to a mobile light reconnaissance one. Although there was a consensus in DND surrounding the requirements for a New Fighter, cost and industrial considerations significantly constrained the process. As Manson points out, military criterion were never "so overpowering

as to dictate on their own merits, the selection of a given aircraft or to eliminate others".[23]

Third, it appears that the basic goal, with the exception of the Leopard I, was to seek 100% offset packages, dominated by indirect ones. This, as noted above, is partially a function of the purchase of existing platforms. In addition, it appears that the contractors were relatively unconstrained in the details of meeting their offset commitments; a point made in the Auditor-General's 1984 Report. That is, the critiques of the offset packages directed towards little technology transfer and the need to address regional concerns reflect this point. With regard to regional concerns, the concentration of the aerospace and electronics industries in Ontario and Quebec largely ensured that the bulk of offsets would be directed towards these regions. Treddinick points out that these two provinces account for 92% of the offset contracts for the Aurora and CF-18 in 1981.[24]

It can be argued that this stage in the evolution of Canadian IRB policy was a learning one. The confluence of a variety of factors including the recognition of obsolete state of Canada's equipment inventory with its military and political ramifications, the shift in defence policy back to NATO in the mid-1970s, the general state of the economy at the time and nature of Canadian defence industrial capacity, and the dominant Ottawa-Quebec political rivalry created pressures which affected the procurement process in general, and offset policy in particular. In effect, this stage can be labelled as a minimalist strategy. That is, a greater concern for simply ensuring that MCPs would not amount to the outflow of Canadian dollars offshore, but would have domestic economic and underlying political value. In so doing, however, the detailed requirements, particularly to ensure industrial benefits, obtain technology transfers, and enhance Canada's industrial competitiveness, of an effective offset policy were largely absent. Above all, the second stage, which can be traced to the Canadian Patrol Frigate (CPF) project, appears as a maximalist strategy in which procurement emphasized a shift to platforms in the development stage, assembler/production capacity, direct benefits and increased regional considerations. In other words, the safe, but low payoff, approach of stage one was replaced by a higher risk approach which promised greater industrial and regional benefits.

5.4 Stage Two

A central critique of the Task Force Report was the failure of existing IRB practice to enhance industrial competitiveness and export opportunities. According to the report, this failure is a function of the small size of Canadian purchases. Corporate incentives to provide significant industrial benefits are seen as a func-

tion of the relative importance of the purchase. For example, the purchase of 138 CF-18s can be seen as relatively important for MD because it was the first export contract for the platform and thus portended some advantage in subsequent international competitions.[25] However, its overall significance to the producer was marginal given its size and existing orders in the United States. In other words, there was little incentive to go beyond short-term sub-contracts to Canadian suppliers which likely had long established relationships with either the firm or the American market.

The failure of Canada's IRB policies also undermined the ability to obtain export opportunities. Canada's defence firms are largely dependent on exports and their success in the international marketplace is a function of their ability to create, penetrate, and/or exploit export niches. The Canadian defence market is important to these firms in a variety of ways. It provides a basis for exports through Research & Development support and the initial purchase of new products. Canadian contracts provide useful bridging between foreign contracts. Also, such contracts can establish working relationships with foreign firms. Regardless, Canadian firms are vitally dependent on exports, and the offset packages associated with the aforementioned projects had little payoff for establishing new markets for Canadian firms; a view strongly held by industry to this day.

Along with the additional critiques related to the absence of regional considerations and the failure to acquire life-cycle support contracts as a means to enhance long-term benefits, views echoed by the Auditor-General, the 1985 Task Force Report set the basis for the establishment of a new policy for IRBs.[26] Central to the new policy was the rejection of the previous goal of seeking 100% offsets in procurement in favour of a more flexible policy in which cost efficacy and operational requirements would be the major defining factors. IRBs were to be focused on acquiring long-term direct benefits related to the platform or system being bought. Although indirect benefits would not necessarily be rejected, they were to be significantly downgraded. The central goal was to use IRBs to ensure long term commercial viability, which implicitly meant export opportunities. Finally, the new policy also emphasized the use of offsets for regional development.

Table One provides the list of defence MCPs of roughly the last decade.[27] Reflecting the policy recommendations of the Task Force Report, only two contracts (Table Two) entail a 100% or more offset requirement: the two Light Armoured Vehicle purchases for the Militia (MILLAV) and Regular Army (LAV); and the Short Range Anti-Armour Weapon (SRAAW). In the case of the LAV, the platform itself is produced under license by General Motors Canada in Ontario, and the initial Militia purchase included 60% direct and 40% indirect offsets. The follow-on LAV purchase for the Regular Army included 100%

direct and 15% indirect offsets; an indication of some degree of technology or production transfer between the first and second purchase. More interestingly, both LAV purchases were demand buys emanating from Cabinet. The first was based on an unsolicited bid stemming from the end of the initial production run

Table 1: Major Crown Projects — 1982 to Present

CPF — Canadian Patrol Frigate consisting of an initial contract St Johns Shipbuilding in 1983 for six frigates, expanded in 1987 to twelve frigates.

TRUMP — Tribal Class Destroyer Update and Modernization with Litton Systems Canada as Prime Contractor in 1986 as a mid-life update to Canada's fleet of four destroyers.

LLAD — Low Level Air Defence project awarded Oerlikon-Buehrie in 1986 being implemented by Oerlikon Aerospace of Quebec.

SARP — Small Arms Replacement Project consisting of the C7 rifle, C8 carbine, C9 light machine gun, and C79 optical sights awarded to Diemaco of Ontario in 1984, with the exception of the C9 being produced by Fabrique-National of Belgium.

HLVW — Heavy Logistic Vehicle Wheeled Contract to UTDC of Ontario in 1988.

AMSA — Arctic Maritime Surveillance Aircraft, Arcturus, awarded to Lockheed for three aircraft in 1989.

MILLAV — Militia Light Armoured Vehicle contract awarded to General Motors of Canada (in Ontario) for 199 wheeled and 8 tracked armoured personnel carriers (APCs), and an additional contract awarded to FMC of California for 22 APCs in 1990.

CANTASS — Canadian Towed Array Sonar System awarded to Computing Devices Canada, Indal Technologies (Canada), Martin Marietta (US) and Litton Systems Canada authorized (stage III) in 1988.

CF-5 — Avionics Upgrade with Bristol Aerospace of Winnipeg signed in 1990 for 40 aircraft. In the last budget, the project has been cancelled.

CH-146 — Utility Tactical Transport Helicopter awarded to Bell Helicopter Textron of Montreal for 100 helicopters based on the Bell-412 in 1992.

LAV — Replacement for the Lynx awarded to General Motors Canada (Ontario) for 229 vehicles in 1992.

LSVW — Light Support Vehicle Wheeled project for a minimum 2751 trucks to replace the 5/4 ton truck in service awarded to Western Star Trucks of British Columbia in 1992.

EST — The Electronic Support and Training System to provide an effective airborne electronic warfare training awarded to Lockheed Canada in 1993.

SPAAW — Short Range Anti-Armour Weapon (heavy) as a cooperative undertaking with France awarded to Aerospatiale in 1993.

TTT — Tactical Transport Tanker contract to acquire five C-130 Hercules to Lockheed (US) in 1990.

TCCCS — Tactical Command, Control and Communications System for the Army awarded to Computing Devices Canada as the prime contractor in 1991.

Table 2: National Defence Major Crown Projects and Percentage of Industrial Benefits

Project	Cost (C$mill)	Industrial Benefit	Direct	Indirect
CPF	9050	48.7%	36.3%	12.4%
TRUMP	1804	48.7%	33.4%	15.2%
LLAD	1039	62%	unspecified	
SARP	355	85%	85%	—
HLVW	365	77%	47%	30%
AMSA	207	51%	8%	43%
MILLAV	156	100%	60%	40%
CANTASS	106	75.6	75.6%	—
CF-5	86	unspecified*		
TTT	323	43%	unspecified	
TCCCS	1899	64.8%	33.7%	31.1%
CH-146	1293	39.1%	21.9%	17.2%
LAV	883	115%	100%	15%
LSVW	279	64.4%	36.5%	27.9%
EST	202	52.9%	39.7%	13.2%
SRAAW	212	100%	70%	30%
AVG		68.5%	49.8%	25%

* The CF-5 project was awarded to Bristol Aerospace of Winnipeg, and thus one can infer that the contract entailed only direct benefits. No specific breakdown of benefits is provided.

for the United States Marines. The second purchase coincided with the purchase of the C-146 Griffon Helicopter from Bell with its production based in Quebec and indications that the General Motors production line was nearing an end with the completion of the Saudi Arabia purchase.[28] Finally, the initial purchase did not meet many of the military requirements for the Militia and the second purchase decision reflected a low priority within National Defence.[29]

It should also be noted that the CF-5 upgrade may also contain a large proportion of Canadian content with the awarding of the contract to Bristol Aerospace of Winnipeg, although specific figures are not available. Bristol Aerospace had participated in the original production of the F-5 under license from Northrup, and the decision to award the avionics upgrade to this firm largely reflected the politics surrounding the CF-18 maintenance contract which had been awarded to Canadair in Quebec.[30]

Overall, Canadian offsets averaged 68.5% for this period, with direct and indirect offsets averaging 49.8% and 25% respectively. Underlying this pattern

was the increased emphasis on participation in the production and/or assembly stage of the various platforms. Specifically, ten of the sixteen MCPs involved Canadian participation in the production/assembly of the platform itself. In all these cases, direct benefits are larger than indirect ones. Even in the remaining cases with one exception, direct benefits are larger than indirect ones, which in turn may reflect investment in areas of Canadian industrial strength.[31]

The shift towards Canadian participation in the production phase of MCPs can be seen as a strategy to improve the prospects for exports. However, it remains to be seen as to whether the strategy will produce benefits. In many of the cases, the projects reside in areas where strong international competition exists, and there is no evidence that there was any commitment beyond Canada or North America.[32] Also, the premium associated with the projects raises questions of cost competitiveness. For example, the CPF represents a "state-of-the-art" naval vessel, but it is also one of, if not the most expensive frigate in the international market; a market area of high protectionism.[33] Despite indications of a potential export contract to Saudi Arabia, there have been no export contracts for the platform.[34] In addition, the ability of Canadian firms to export in general is hampered by existing Canadian export control policies and procedures.[35]

The failure to acquire foreign markets for these products has significant implications for the cost-effective spending of limited and shrinking defence dollars and future defence procurement. The additional costs associated with supporting the initial setup of a production capacity, relative to existing foreign production in which initial costs have already been absorbed and amortized, represents a significant premium for defence. Although part of the 1985 reforms included the shifting of costs associated with industrial benefits away from National Defence towards cost-sharing with the responsible government agencies, it still amounted to a premium for defence purchases and for government spending as a whole.[36]

Canadian participation in the production/assembly stage as the centrepiece of a strategy to ensure meaningful industrial benefits also had implications for future procurement. Unless an export market could be established for the new capacity, the firm became dependent on Canadian purchases; a dependency with economic and political implications. As implied above, the second LAV decision can be understood as a function of the previous decision and government concerns with regard to lost employment and the political balance of contracts between Ontario and Quebec. In the case of the CPF, part of its industrial benefits package included the creation of Paramax in Montreal to undertake the systems integration for the new frigate. Subsequently, Paramax would also become the prime contractor for the systems integration in the now aborted EH-101 project, discussed below. Related, the government now faces the issue of the future

of Canada's naval shipbuilding base which was re-established with the CPF project.[37] The only planned future Canadian contract, already signed with Fenco as the prime contractor, is for the Maritime Coastal Defence Vessel. Although the contract entails a commitment to build the ships in a Canadian shipyard, it remains to be seen if this means St.Johns and/or the other company involved, MIL of Quebec. The failure to award this part of the contract to either or both will effectively have significant implications for their future; a future in one region, the Atlantic, which is economically depressed and has high levels of unemployment.

Finally, future procurement decisions are affected in another way. Decisions to use Canadian capacity leading to the procurement of a system which doesn't clearly meet military requirements affects associated procurement decisions. For example, the CH-146 decision has apparently affected decisions with regard to an air mobile howitzer. Just recently, Canada announced the purchase of the GIAT Light 105mm MKII ostensibly as the best gun of its class available, but more likely as the only gun which is light enough to be lifted by the CH-146.[38] At the same time, Canada has completed an arrangement in which the Netherlands is upgrading the current 105mm pack howitzer and purchasing the C-7 rifle from Diemaco. In other words, at a time of budget reductions and a defence review in which some are questioning the utility of maintaining the artillery, Canada is in the process of holding two separate 105mm howitzers, and upgrading its current holdings as a means, apparently, to support Canada's only small arms producer.

Another concern underlying industrial benefits policy during this period was the nature of competition. Although the information provided in the National Defence estimates may simply have failed to report a competitive bid process, only three of the identified MCPs mention the decision based on competition. An additional one, the TCCCS, reports a competitive bid restricted to Canadian firms. The Auditor-General also reports that the CPF and HLVW competitions were restricted to Canadian firms.[39] According to other sources, the MILLAV, LAV, and CF-5 were ministerial directed or demand purchases. The SARP purchase may also have lacked a competition given that Diemaco is the only small arms producer in Canada. Finally, the AMSA purchase is likely to have been without competition given the previous purchase of the Aurora and the logic of eliminating any significant additional related infrastructure.

It is not possible to estimate the extent to which the absence of competition or restricted Canadian competition translated into additional costs. In some cases, such as the HLVW, LLAD, and AMSA, they appear to have been the lowest bidder. Moreover, it is difficult to ascertain the degree to which the project definition stage in some cases largely eliminated competition on military

grounds and related cost grounds, as in the case of the CF-18. Recall that both the Aurora and CF-18 decisions occurred in the context of competitions partially along the lines of offset packages. In the case of the MCPs of this period, many of the decisions occurred without competition. For example, both LAV purchases, the CF-5 upgrade, the CH-146 Griffon, the Arcturus, the CPF, and the HLWV either were demand buys or occurred in the absence of an international competition. The shift in emphasis towards long-term benefits was translated in a desire to ensure that the production/assembly stage would occur in Canada. Thus, existing production capacity or the willingness of a foreign firm to set up a production capacity in Canada became a central consideration, regardless of specific military priorities or requirements.[40]

Underlying this consideration is the process through which offset commitments are formulated. According to the Auditor-General, the onus on offset packages remained with the various companies. Yet, there is little evidence that the subsequent contracts were related to competition along the lines of offset packages, which had been experienced in the 1970s. On the contrary, the combination of restricted bidding to Canadian firms and demand bids in many cases ensured that offset package competition would not obtain; a situation which may have introduced further inefficiencies. Of course, this environment may also have created the conditions whereby companies recognized the requirements for successful bids; an environment of a relatively high level of Canadian direct content and participation in the production/assembly stage. Along with this requirement, there also existed the demand for regional distribution.

Table Three reports the regional distribution of contracts as available. The averages for the various regions are 30.9% for Quebec, 27.9% for Ontario, 18.7% for the West, and 10.8% for Atlantic Canada. Of course, these figures are only illustrative. The Ontario proportion is likely to be significantly higher, reflecting at a minimum that both the MILLAV and SARP projects were produced in Ontario. Only three projects report the West and Atlantic Canada receiving the largest share of industrial benefits; the TCCCS project which entailed a commitment to set up a production capacity in Alberta; the LSVW produced by a firm in British Columbia; and the aforementioned CPF.[41]

It appears evident that contract awards were significantly influenced by regional considerations. Whether this has translated into some form of codified distribution which bidding companies had to respond to is unclear. Nonetheless, companies formulating bids for MCPs were likely, ceteris paribus, to be more successful if their offset packages contained a regional distribution. Problematic, however, for any company is its ability to find Canadian firms, or willingness to create new capacity in the various regions outside of Central Canada. With the Canadian industry largely located in "Golden Triangle" of Greater Toronto,

Table 3: Regional Distribution as a Percentage of Total Industrial Benefits

MAP	Atlantic	Quebec	Ontario	West	Non-Allocated
CPF	35.9%	30.3%	15%	2.4%	16.3%
TRUMP	1.2%	38.2%	56.5%	4.1%	—
LLAD	11.8%	63.4%	24.2%	2.6%	—
$SARP_2$	—	20%	—	—	—
$MILLAV_3$	15%	—	—	15%	—
TCCCS	2.3%	3.6%	13.1%	73.9%	7.1%
LAV	10%	8%	65%	10%	73%4
LSVW	2.1%	3.8%	17.4%	33.3%	43.3%
SPAAW	8%	80%	4%	8%	—
AVG	10.8%	30.9%	27.9%	18.7%	

Notes:

1. Based on available data reflecting contractual commitments. MCPs reported in Table 1 and 2 lacking this information are excluded.
2. No specific breakdown is provided except a 'best effort' commitment to Quebec for Canadian subcontract work.
3. No figures are available for Quebec or Ontario, but it is reasonable to surmise that the bulk went to Ontario where the vehicle was produced. It is also noted that the value achieved in the Atlantic and West regions was 177.6% and 124.1% of the commitment.
4. To be divided between the Atlantic and West.

Montreal, and Ottawa, offshore firms are significantly constrained in the formulation of their bids. For Canada, this creates obstacles for its ability to obtain technology/production transfer with export viability. It is likely the case that existing regional capacity does not have the technical skills or ability to absorb new technology easily. As a result, offset sub-contractors may only be available to do relatively low technology build-to-print work.

Politically, demands for ensuring some form of equitable regional distribution of contracts either for each project or over a series of projects reflect the nature of the federal political system. Publicly, there has been the longstanding belief that the federal government has privileged Central Canada in general, and Quebec in particular in the awarding of contracts; a belief which resurfaced over the aforementioned CF-18 maintenance contract. This perceived preference towards Central Canada is attributed to its political weight within the federal system, and towards Quebec is generally credited to the longstanding issue of Quebec separatism. At the same time, the federal government must also respond to growing western alienation. The net result is a set of political incentives to

respond to these various factors with defence contracts as the means to respond. Examining the timing of recent MCPs tentatively indicates this response. The West receives the TCCCS and LSVW projects in 1991 and 1992 respectively, Quebec receives the CH-146, and Ontario the LAV in 1992. Moreover, the timing of the latter two announcements nearly coincide. Above all, as indicated in the chart on the regional distribution of MCPs, this is reflected in the dominance of one region in the majority of cases. Thus, along with the drive to acquire and/or ensure greater direct industrial benefits through the creation or use of Canadian production capacity, this period of Canadian policy entailed a greater emphasis on ensuring the spreading of defence dollars across the regions.

5.5 The EH-101 Case

Although the EH-101 project, designed to replace the Sea King and Labrador platforms for naval and search and rescue operations (SAR), has been cancelled by the new government, it is a valuable case for examining the current approach to defence offsets. Perhaps most indicative is the decision to cancel itself; a clearly political decision which had little regard for both the operational and economic realities surrounding the decision itself. In particular, considerations regarding the need to procure a New Shipbourne Aircraft (NSA) had followed on the decisions to procure the Canadian Patrol Frigate (CPF) and upgrade the existing TRIBAL Class Destroyers (TRUMP Programme), formalized with the establishment of the NSA project office in 1986, followed by the creation of the New SAR office in 1988. Regardless of the "writing on the wall", opposition to the final decision to purchase the EH-101 did not appear until its initial announcement in July 1992, and subsequently re-emerged with a cabinet shuffle and leadership race in the ruling Conservative Party in the winter-spring of 1993.[42]

Reflecting the nature of defence debates in Canada, opposition to the EH-101 decision was relatively ill-informed, at times superfluous, and became a political football with little consideration of both the operational realities with regard to the aging Sea Kings and Labradors, the economic realities associated with the industrial and regional benefits, and costs of cancelling the project. According to current estimates, $C578 million has been expended on the project[43] The alternative life-extensions options for the Sea Kings and Labradors would range from a minimum estimate of C$960 million to a maximum of C$2.4 billion. Thus, at a cost ranging from C$1.5 to C$3 billion roughly, compared to the $4.4 billion cost of the EH-101 over the thirteen years of the programme, Canada will save from C$1 to $2 billion, while maintaining a fleet of

aircraft unable to meet fully operational requirements with a life extension to roughly 2010 (rather than roughly 2030 for the EH-101).[44] At the same time, the EH-101 provided a single platform to undertake two distinct operational roles, thereby saving costs associated with maintaining two separate infrastructures. It remains to be seen if the final decision will result in one or two platforms. Nonetheless, it is clear that the present government is not likely to reconsider the EH-101 for either role, and given the governments view that the maritime ASW role is relatively obsolete with the end of the Cold War, it may translate into a decision to purchase a new SAR helicopter while holding the decision on the maritime replacement in abeyance. If this is the case, then it is likely that two separate platforms will be procured with the additional costs associated. In other words, the net result is likely to be more expensive than the original EH-101 decision in the long run.

Regardless of the political factors which led the new Liberal government to cancel immediately the EH-101 project, the offset package negotiated for the purchase is indicative of a variety of long-standing considerations from previous cases. First of all, the decision to purchase the EH-101 did not seem to include any attempt to structure the competition around offsets. Similar to the Leopard case, only one existing operational maritime helicopter, excluding either an upgrade to the Sea King or purchasing new Sea Kings, was available: the Seahawk. An offset package associated with such a purchase would likely have been similar to the Aurora and Arcturus purchases; an existing platform, in which Canadian industry would likely only provide the electronics and ASW suite.

However, such a purchase would likely have only limited payoffs for future export contracts, as appears to have been the case in the past. Moreover, the Navy rejected the Seahawk on grounds that it would not meet the unique operational requirements of Canada.[45] Also, the Seahawk lacked the range, capacity, and margin of safety defined as necessary for Canadian SAR requirements.[46] As a result, Canada was left with choosing between platforms either in the design, research and development stage or non-maritime forms. Thus, in contrast to the Leopard and CF-18 cases, Canada choose to procure a helicopter which was in the developmental stage. Although the decision contrasted with previous decisions to reject untried and untested platforms, it did differ in comparison to the CF-18 case. Whereas the Northrup F-19 had not been purchased by anyone, there was a commitment from the British Navy to purchase the EH-101 and expectation that Italy would also purchase the platform, especially given that the EH-101 was a joint venture between Augusta and Westland.

It is unclear, nonetheless, the extent to which industrial considerations and related export opportunities played a role in the decision to procure the EH-101. Buying into a system in the development stage does portend greater possibilities

for technology transfer, innovation, and future contracts. According to the Department of National Defence, the contract, with offset guarantees of 113% entailed significant technology transfer. This transfer may have been a function of direct Canadian participation in the providing 10% of the platform itself, and Canadian participation in providing 83% of the electronics packages under the lead of Paramax as the prime contractor for this part of the contract. In the latter case, this may entail the transfer of technology from American parent firms to their Canadian subsidiaries.

Regarding future contracts and export opportunities, the final agreement with EH Industries provided a guarantee for future export related work. Canadian industry's contract to build 10% of the basic air frame, included not only the initial 50 platforms to be purchased by Canada, but all future platforms sold by the Augusta-Westland group, as long as Canadian firms remained competitive. According to government sources, future sales of the EH-101 were estimated in the 800 range. In addition, future export opportunities may have resided in two areas. First, future sales of the platform may have created opportunities for Paramax, and other Canadian firms participating in the electronics component to bid on future EH-101 sales to other purchasers, either as a group or individually. Of course, they would have faced competition from the companies providing the similar package directly to Augusta-Westland relative to the purchase of the platform by Great Britain and Italy. Second, the EH-101 decision was closely tied to the CPF. While export opportunities for the CPF are doubtful, the ability to offer an integrated "state-of-the-art" frigate and operational helicopter could have been attractive to many.

The EH-101 decision is indicative of two other phenomena of Canadian defence offset. The awarding of the electronics, systems integration component to Paramax as the prime contractor can be partially understood as a by-product of an earlier decision. A subsidiary of an American firm, Paramax was created in Montreal as part of the industrial benefits package associated with the CPF. It was created to develop and integrate the electronics, combat, communications, and machinery systems of the new CPF. Although the CPF project is not yet completed, one can speculate a degree of dependency on defence contracts. In other words, the EH-101, and likely future related contracts will see Paramax in a prominent role. This is not to argue that Paramax is not major, leading innovator. Rather, simply to point out that past offset packages can act to constrain options for future contracts.

Finally, the EH-101 reflected the final complaint of the Nielsen Task Force and Auditor-General's report; regional benefits. The contract package contained a specific breakdown of regional distribution: 30% Quebec, 30% Ontario, 25% Prairies, and 15% Atlantic Canada. This may reflect a codification of regional

requirements in current and future offset agreements. At the same time, examining the specific companies identified regionally in the various press releases indicates an underlying strategy of support to existing companies — the strong. There was no indication that the contract included any relatively new firms, or promises to create ones as a part of the contract, notwithstanding the creation of EH Industries.

5.6 Conclusion

The evolution of Canada's policy towards defence industrial offsets, Industrial and Regional Benefits, reflects, not surprisingly a learning process. From the inital decision to formulate a specific policy or strategy in the mid-1970s to the now aborted EH-101 project, there has been an desire to structure Canadian offsets in an attempt to maximize benefits for Canada. Recognizing the shortcomings of indirect offsets, lack of technology transfer, short term build-to-print, and the lack of long term export opportunities can be seen to have culminated in a strategy exhibited by the EH-101 IRB package. The search for these benefits was not simply motivated by balance of trade and payment concerns. As evident in the search for industrial benefits, Canada also sought defence offsets as a means to enhance Canada's industrial capability through foreign investment and technology transfer. Requirements for successful bidding on Major Crown Pojects included a guarantee of offsets. In so doing, foreign companies were led to establish either subsidiaries in Canada or working relationships with Canadian firms. Thus, the high proportion of foreign and particularly American ownership of Canadian defence firms can be partially traced back to offset demands.

The evolution of Canadian IRB policy can be said to have come full circle. The apparently licensed production of pre-1970s period is followed by a period of a low risk minimalist strategy in the 1970s and finally a return to acquiring a Canadian role in production/assembly. Relatively common to all is the problem of exploiting industrial benefits as a means to provide a foundation for expanding industrial export opportunities and international competitiveness, notwithstanding the continued problem of export licenses. In the process, failure would have significant implications for subsequent decisions whereby future decisions became hostage to past decisions. The EH-101 project, perhaps, can be seen as the logical extension of this search for ensuring that Canadian firms would become internationally viable through initial participation in the development phase of the platform. Unfortunately, the intervention of political forces leading to its cancelation clearly indicates one of the major problems in formulating an effective strategy.

It is difficult to weigh the relative benefits and costs of Canadian policy over time. There is no doubt that it has enhanced the technological capacity and competitiveness of Canadian industry in many cases, Canada's balance of payments situation, and has provided employment across the country.[47] In addition, one can not ignore the political benefits, real or perceived, that may have been derived from Canadian IRB policy. However, the price paid in many cases has been borne by DND in terms of its ability to acquire the military capabilities necessary to meet its many roles and commitments. The fundamental question facing Canada is whether it can continue to use defence dollars to meet a wide range of economic and political demands at the price of Canada's military capability. There is no doubt that defence spending will continue to shrink in the foreseeable future, and despite the intent in DND to protect capital spending, there is no doubt that it will shrink as well.

This is not to argue that Canada must forego entirely its search for IRBs in defence spending. Rather it is to recognize that there are structural limits which Canada faces in terms of its defence industrial capacity in which IRBs should be concentrated on to ensure that existing strengths and advantages are exploited. In some cases, Canada's DIB through its unique access to the American market and longstanding business links to American firms is a natural candidate for participation in Canadian purchases from the United States and elsewhere. But, these firms are likely to participate regardless of any formal policy. Of course, there are problems on the horizon in the context of American defence industrial policy as it may affect the DPSA relationship and thus Canadian access to the American market, and corporate re-structuring in the United States. But, in terms of the former, existing IRBs policy is likely to be central to American desires to re-structure the relationship. Paradoxically, it should be noted that the successful search for a free trade relationship with the United States coincided with an anti-free trade policy in the defence area.

For Canada, as for many small defence markets, it faces the dilemma of supporting the strong within Canadian industry at the price of the weak in a regional economic and political sense. The dilemma, in effect, is between the industrial strengths of Central Canada by in large and the industrial weaknesses of the rest of Canada. On top of both, of course, are the various domestic political forces within the Canadian federal system. Concentrating on the strengths is a strategy to support firms which have existed successfully for significant period of time, are likely to have well established ties to other firms both in Canada, the United States, and elsewhere, and likely to have developed and exploited export niches. Offset support to these firms, it can be argued, is a means to strengthen their competitiveness through access to new products with potential future

export opportunities. In addition, these firms are also likely to be able to absorb new technology, thereby promoting technology transfer and long term viability. However, as noted above, these firms are also likely to be the ones which would benefit from Canadian offshore defence procurement independent of offset requirements. Their long established technology niches and industrial relationships make them viable partners for foreign firms on economic efficiency grounds. Of course, there is no guarantee that foreign firms would voluntarily use Canadian firms. Nonetheless, an offset strategy to promote the strong is, in effect, a minimalist offset strategy.

The regional side of the equation, representing a desire to redirect government spending towards economically disadvantaged and depressed areas of the country, thus appears as a maximalist offset strategy. Such a strategy implies supporting the weak and establishing industrial capacity which will have a significant impact upon local economies. Offshore contractors are forced to move beyond Canadian firms with a long established track record and possibly existing ties with these contractors and establish new relationships with Canadian firms. In so doing, the strategy is a vehicle for expanding Canada's industrial and technological base. Firms not normally able to compete for such contracts will become beneficiaries of government funding, and potentially technology transfer. However, the problem of ensuring long term viability remains relative to existing domestic and international capacity. Without any fixed guarantee of participation in future contracts from the prime contractor, particulary problematic if the product is already in the full production stage elsewhere, these "new" defence firms become wholly dependent on future Canadian contracts.[48] Of course, an offset strategy to mix the benefits of the minimalist and maximalist perspectives is hinted at in the various critical reports. In this case, direct Canadian participation in production can be directed towards the strong, while relatively long-term maintenance and support could be directed towards the weak. Of course, this division of labour itself is problematic relative to the geographic distribution of capacity, and the associated costs in training and qualifying companies for participation in these contracts.[49] Moreover, any attempt to construct a rational offset strategy is in constant conflict with forces which bring into play a wide range of political considerations.

Overall, the formative years in the evolution of Canada's IRB offset practices revealed numerous shortcomings. Many of the shortcomings can be related to a learning process, and the Task Force Report provides a strong foundation for integrating the lessons of the past in terms of subsequent procurement. However, there remains an underlying tension in the very nature of IRBs. Requirements to use offsets for improving industrial competitiveness and export opportunities are

in conflict with requirements to support regional development. Above this conflict are the political forces which operate on a different calculus; one that generally undermines the development of an effective offset policy.

Regardless, it is clear that the dilemmas facing Canada in developing a coherent IRB strategy are not likely to be resolved. The complexity of the system itself with its numerous government and non-government actors, and the external forces driving for a reduction in obstacles to some form of free trade in defence confronting domestic demands for the use of federal dollars for economic and political ends, both of which are likely to increase in degree in the future as other countries seek new defence markets and federal spending as a whole declines, are fundamental impediments to the development of a coherent IRB strategy. The victim, if there is one, is likely to be National Defence which will increasingly find itself unable to procure the military equipment it needs to meet its commitments; a situation somewhat affordable during the Cold War which will continue in reflection of the wider political and social context of Canadian attitudes towards defence.

For companies seeking to penetrate the Canadian market, they will continue to face requirements to formulate their bids in terms of providing industrial and regional benefits. Despite recent announcements of Canada seeking "the best value for money spent" in support of Canadian military requirements, business as usual will continue. Of course, Canada in light of defence cuts after the Cold War will have some degree of leverage in enticing foreign firms seeking new markets to provide these benefits. However, the premium Canada pays in so doing will have wider foreign policy implications in terms of its ability to meet its military commitments and thus acquire influence on the international stage and may likely be one of the many indications of Canada's drift back to isolationism.

Endnotes

1. Tucker argues that a non-military tradition is one of the dominant aspects of Canadian political culture, which has created a preference for diplomatic and pragmatic approaches to international politics. Robert Tucker. **Canadian Foreign Policy: Contemporary Issues and Themes**. Toronto: McGraw-Hill.1980. Middlemiss and Sokolosky provide an overview of the various explanations pertaining to the low salience of defence in Canada. D.W. Middlemiss and J.J. Sokolosky. **Canadian Defence: Decisions and Determinants**. Toronto: Harcourt, Brace, Jovanovich. 1989.

2. During the 1980s, Canadian defence spending did rise in absolute terms. However, in relation to the poor state of equipment after decades of neglect,

this increase did not amount to an expansion in Canada's military capability. In fact, Canadian spending as a proportion of GDP only marginally increased, as a proportion of Federal spending remained largely static, and equipment holdings in relation to the past shrank. See D. Middlemiss. "Canadian Defence Funding: Heading Towards Crisis". **Canadian Defence Quarterly.** 21:2. 1991.

3. Diefenbacker's indecision with regards to the acquisition of nuclear warheads for the BOMARC missile, as part of deeper concerns about Canadian-American relations are seen as central to the outcome of the 1962 election. However, defence should be considered as the symptom of larger problems within the Conservative government. Outside of the conscription issues during both World Wars, the only other election which had a major defence component was the 1911 election in which the naval question played some role. Even here, it was overshadowed by the debate over free trade with the United States. Interestingly, many thought in the run up to the 1988 federal election that the issue of nuclear submarines would be a major issue. It was overshadowed by the debate on the Free Trade Agreement (FTA) with the United States. Finally, in the most recent election, many believed that the EH-101 decision would be significant, even though it had a marginal, if any impact on the crushing defeat of the government.

4. These agencies are the Atlantic Canada Opportunities Agency (ACOA), the Federal Office for Regional Development in Quebec, and Western Economic Diversification Canada.

5. While IRBs reflect elements of an industrial strategy, Byers points out that there is no systematic link between economic policy and industry in Canada as a whole and in the defence area specifically. R. Byers "Canadian Defence and Canadian Procurement: Implications for Economic Policy" in **Selected Problems in Formulating Foreign and Economic Policy**. D. Stairs and G. Winham, eds. Toronto: University of Toronto Press. 1985.

6. Privileged access is primarily the function of the waiver of the **Buy American** restrictions. Existing American legislative barriers include Small and Disadvantaged Businesses Set-Asides, the Berry Amendment (food and clothing for the military), the Burns-Tollefson Amendment (naval vessels), and the Bayh Amendment (Research and Development). Also, Canadian firms are unable to compete on certain projects for national security reasons.

7. For the period 1959-1986, Canada had a balance of defence trade deficit of C$2.437 billion. Robert Van Steenburg. "An Analysis of Canadian-American Defence Economic Cooperation" in **Canada's Defence**

Industrial Base. David Haglund. ed. Kingston: Ronald P. Frye. 1988. By all accounts, this deficit has continued. It should be noted, however, that large portions of defence related trade is not tracked between Canadian suppliers and American producers.

8. The Auditor-General reports that beginning in 1976, offsets became commonplace in Canadian policy. Auditor-General. **Report of the Auditor-General of Canada to the House of Commons 1992**. Ottawa: Supply and Services Canada. 1992. According to Todd, "Canada pioneered offset deals in the 1970s, ..." D. Todd. **Defence Industries: A Global Perspective**. New York: Routledge. 1988. It should be noted, depending on one's definition of offsets, that Canada prior to the 1970s undertook a variety of licensed production arrangements with American firms, as in the case of the F-104 Starfighter and F-5 Freedom Fighter.

9. The fourth MCP is the Canadian Patrol Frigate, which began in 1983. The original project entailed the purchase of 6 Frigates, shore facilities, and support from St. Johns Shipbuilding Limited. Subsequently, the contract was divided between St. Johns Shipbuilding of New Brunswick and MIL of Quebec, and in 1987, the contract was amended for an additional 6 Frigates. The overlap between the stages noted above, the appearance of the Auditor-Generals Report of 1984 which was critical of the CF-18 offset package, and the uniqueness of this project relative to the three mentioned above, it is discussed within the second stage.

10. The military's preference apparently was to procure existing American M-60s off-the-shelf.

11. The Third Option was initially introduced by Mitchell Sharp, then Minister for External Affairs in 1972. Basically, the original paper argued that Canada faced three options with regard to its international economic position: a status quo position which entailed dependency on the relationship with the United States; closer economic integration with the United States; and diversification towards expanded economic relationships with Europe, the Pacific Rim, and elsewhere. Mitchell Sharp. "Canada-U.S. Relations. Options for the Future". **International Perspectives**. Autumn. 1972.

12. Beyond the unilateral nature of the decision which violated the spirit of multilateralism in NATO, it is generally argued that opposition to the decision by Germany was not directly a function of the military importance of Canada's commitment to Europe and West German defence per se, but rather driven by a perceived inter-relationship between the Canadian and American commitment. A Canadian withdrawal, it was feared, would ignite

isolationist forces in the United States possibly leading to an American military withdrawal.

13. D. Todd. *op. cit.*, p. 231.

14. R. Tucker. *op. cit.*, pp. 155–162

15. Details are unavailable due to the confidential nature of the Request for Proposal (RFP).

16. Cited in R. Tucker. *op.cit.* p. 174.

17. In contrast to the Leopard I, there were several contenders besides the P-3 Orion and modified Boeing 707 LRPA. The others were quickly rejected for either failing to meet the requirements, too costly to maintain, or unproven. In comparison to the second stage, proposals to procure a Canadian produced platform were rejected.

18. F.L. Boyd. "The Politics of Canadian Defence Procurement: The New Fighter Aircraft Decision". in **Canada's Defence Industrial Base**. David Haglund.ed. Kingston: Ronald P. Frye. 1988. Boyd also points out that Canada missed several opportunities prior to the 1980 decision including participation in the Tornado Project, and proposals by Grumman to procure the F-14 and MD to procure the F-15. These missed opportunities were in part a function of funding considerations relative to the above mentioned Leopard I and Aurora purchases.

19. The figure of 100% is derived from confidential interviews and are inconsistent with the values reported above. The indirect/direct values are provided in National Defence. **1994–95 Estimates. Part III. Expenditure Plan**. Ottawa: Supply and Services Canada. 1994. Total forecast expenditures, non-recurring costs, as of March 31, 1994 are $C4.859 billion. On this basis, the indirect/direct proportions are 50% and 9% respectively. It is also noted that MD has provided industrial benefits valued at $C4.199 billion, representing 86% of forecast expenditures. Also, MD has transferred technology worth $C294 million on a commitment of $C291 million.

20. Among the elements of the offset package include fibre optics, composite materials, metals processing, and MD assistance to Canadian firms in licensing programs from American firms in the areas of wind energy, auto parts, health care products, and food processing. Office of Management and Budget. **Impact of Offsets on Defense-Related Exports**. 1986.

21. Auditor-General. **Report of the Auditor General of Canada to the House of Commons**. Ottawa: Supply and Services Canada. 1984. pp. 12: 30–32.

22. National Defence. **1994–95 Estimates. Part III. Expenditure Plan**. Ottawa: Supply and Services Canada. 1994.

23. Cited in Boyd. *op. cit.* p. 145.

24. J.M. Treddenick. "Regional Impacts of Defence Spending" in **Guns and Butter: Defence and the Canadian Economy**. B. MacDonald. ed. Toronto: Canadian Institute of Strategic Studies. Proceedings. 1984.

25. There are two elements to this perception: the requirement for the home nation to purchase the system; and the ability to obtain an initial export contract. The absence of both significantly explains the failure of the Northrup competitor to the F-16 and F-18 in particular. In the case of Canada, many individuals over time pointed out the significance of Canadian capital decisions for other nations. As a nation which rarely purchases new systems, its decisions are viewed as important indicators of the utility and value of the system by other nations.

26. Both the Task Force and Auditor-General's Reports argue that overhaul and maintenance, spare parts, and product support would provide not only significant contracts to Canadian firms, but also serve to a basis for increased export opportunities. In some cases, this may be correct. Such contracts may enable some firms to establish new export niches in the upgrade and life-extension component of defence production through the transfer of the requisite technology from the producer. However, life-cycle support is likely to have limited utility for establishing new export markets. It is the logical focus for most nations which import their major weapons platforms. Moreover, if the producer is willing to transfer the technology to Canada, it is likely either to be willing to transfer the technology to others as well or demand assurances that the technology will be restricted in application.

27. The list represents 16 of the 24 MCPs identified in the 1994-95 Estimates. Seven projects were excluded. They are the CF-18 and CF-18 AAM, North Warning System, Strategic Airlift Replacement, Militia Training Support centre, the New Shipbourne Aircraft/SAR Helicopter, the Maritime Coastal Defence Vessel and the Military Automated Air Traffic Control System. The CF-18 is discussed in the previous section and the NSA/SAR is discussed below. The North Warning System relates to a variety of considerations underlying traditional funding relationships in NORAD. The Strategic Airlift was a contract to purchase 5 used Airbus A310s consisting of three from Canadian International and one from International Markets and Blenhiem Aviation respectively. There were no industrial benefits associated with the purchases. The Militia Training support centre is a relatively

distinct project type and the Air Traffic Control Systems and Coastal Defence Vessel industrial benefits are under negotiation.

28. Ch-146 Griffon is based on the civilian Bell-412 Helicopter.

29. Auditor-General. **Report of the Auditor-General of Canada to the House of Commons 1992**. Ottawa: Supply and Services Canada. 1992.

30. The decision to award the CF-18 contract to Canadair met with substantial public opposition when it became known that Bristol had the best technical and price package. It was generally believed that the CF-5 contract was awarded to Bristol in Winnipeg as compensation for the loss of the CF-18 contract. It should also be noted that Bristol had received a contract at the same time from the USAF to upgrade elements of their F-5 fleet. Bristol and the Canadian government are currently involved in a legal dispute with Northrup over the rights to compete for foreign contracts to upgrade the F-5; a very lucrative market given the size of the F-5 fleet internationally. See B. Opall. "Northrup, Bristol to Settle Simmering F-5 Upgrade Dispute". **Defense News**. 9:11. Mar. 21–27. 1994.

31. The exception is the Arcturus Arctic and Maritime Surveillance Aircraft which involved the purchase of three CP-140s equipped for these roles; the same aircraft as the Aurora. Part of the package does include a commitment by Lockheed for Canadian participation in the F-22 project.

32. The production of the LLAD in Quebec included, it appears, a mandate for production in North America. Similarly, the LAV production line also has a North American mandate.

33. See Ian Anthony. **The Naval Arms Trade**. Oxford: Oxford University Press. 1989.

34. The current debt load of Saudi Arabia to the United States for military purchases significantly reduces the probability of an export contract. See P. Finnegan and B. Opall. "U.S. Grants Flexibility in Saudi Loan Repayments" **Defence News**. 9:21. May 30–June 5, 1994.

35. Essentially, the government seeks industrial benefits and technology transfer to enhance the international competitiveness of Canadian firms, but these firms then face significant obstacles in acquiring the necessary export permits to exploit opportunities stemming from IRBs; a point noted in the recent Auditor-General's report. Auditor-General. **Report of the Auditor-General of Canada to the House of Commons 1992**. Ottawa: Supply and Services Canada. 1992. p. 402.

36. In some cases, the awarding of the contract regardless was to the lowest bidder, such as in the case of the Low Level Air Defence system, and the Heavy Logistic Wheeled Vehicle (HLWV). In the former case, it represented the first export contract for the LLAD, developed by Oerlikon in Switzerland and assembled by Oerlikon Aerospace of Quebec, which may have been motivated by hopes of using the Canadian contract as a means to penetrate other markets, particularly the United States where the Sgt. York system was in the process of being cancelled. The HLWV contract, assembled by UDTC of Ontario, used components from Steyr of Austria. Interestingly, UDTC no longer produces heavy trucks.

37. The problem confronting Canada is almost identical to that confronting the United States shipbuilding industry. In the latter case, this industry is almost wholly dependent on U.S. Navy contracts and maintenance of this part of the defence industrial base is a major issue confronting the United States today. In Canada, defence spending accounts for 62.4% of employment in the shipbuilding and repair industry, and 100% of employment in shipbuilding in New Brunswick (i.e. the CPF). Major Serge Caron. **The Economic Impact of Canadian Defence Expenditures**. Occasional Paper 1–94. Kingston: Centre for National Security Studies. 1994.

38. "Canadian Gun Order is a first for NATO" Jane's Defence Weekly. July, 2, 1984. p. 16.

39. Auditor-General. **Report of the Auditor-General of Canada to the House of Commons 1992**. Ottawa: Supply and Services. 1992. p. 397.

40. This point has already been noted above in the case of both LAV purchases. The CH-146 purchase is designed to replace three previous helicopters: the Kiowa, Huey, and Chinook. While the CH-146 can perform the functions of the Kiowa and Huey, it lacks the any significant heavy lift capacity previously available with the Chinooks.

41. The government in the mid-to-late 80s had also decided to procure a Class 8 Icebreaker from Versatile of Vancouver, which could be seen as an attempt to balance the regional distribution of contracts. This decision however fell victim to budgetary limitations. It is possible that the MCDV may be awarded to Vancouver in lieu of the cancelation of this project. If so, the future of St. Johns Shipbuilding may become a major political issue.

42. Specifically, the leading candidate, who would subsequently win the leadership race, to replace Brian Mulroney, Kim Campbell, was moved into the Defence portfolio.

43. National Defence, **1994–95 Estimates: Part III Expenditure Plan**. Ottawa: Supply and Services Canada. 1994. p. 160. It is unclear whether this figure accounts for all remaining outlays and penalties associated with cancelation. Unofficial estimates put the final total near the C$1 billion range.

44. Part of the political debate surrounded the original cost estimate of C$4.4 billion which was the estimate base on current dollars and included infrastructure, maintenance, training, and support. Almost immediately after the announcement, the figure grew to C$5.8 billion and higher based upon future inflation rates.

45. According to Project members, the SEAHAWK could not operate independently from its naval platform; a requirement defined as vital for the New Shipbourne Aircraft. In particular, this entails the ability of the helicopter in its ASW role to act independently of the mother ship. In contrast, the SEAHAWK requires a direct linkage to its mother ship.

46. Additional range was viewed as vital to support SAR needs in the North Atlantic. Similarly, the EH-101 has three engines and is able to fly with one engine incapacitated. Finally, the EH-101 was also to be equipped with a de-icing capability; also viewed as vital for service in the North Atlantic.

47. There are no figures available on employment generated by defence IRBs. According to the most recent study on the economic impact of defence spending, only 0.6% of industrial jobs in Canada are a function of domestic purchases. Major Serge Caron. *op. cit.*

48. Industry also notes that regional requirements result in reduced productivity and increased over-capacity. In the long term, the net result is short term regional contracts with little possibility of long term success, unless the government is willing to continue to support specific firms in specific regions through future contracts.

49. Joint Industry/Government Working Group. **Major Crown and Complex Capital Projects: Procurement Issues and Recommendations**. 1992

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