

**The End of the Cold War and the Transformation of the
US Defence Market and Defence Industrial Base:
Implications for Canada**

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A thesis submitted to the Faculty of Graduate Studies
in partial fulfilment of the requirements
for the degree of

Master of Arts

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**THE END OF THE COLD WAR AND THE TRANSFORMATION OF THE
US DEFENCE MARKET AND DEFENCE INDUSTRIAL BASE:
IMPLICATIONS FOR CANADA**

BY

WENDY WEBER

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of Manitoba in partial fulfillment of the requirements of the degree
of
MASTER OF ARTS**

Wendy Weber 1997 (c)

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Abstract

This thesis is concerned primarily with assessing the implications of post-Cold War changes in the United States defence market and defence industrial base for Canadian defence firms and for the Canada-United States defence economic relationship. It is divided into three main parts. The first part traces the evolution of the Canada-United States defence economic relationship from the Ogdensburg Declaration of 1940 to the establishment of the North American Defence Industrial Base Organization (NADIBO) in 1987. The second part looks at the period since the end of the Cold War and, more specifically, at the various changes in US defence industrial policies and corporate strategies that have taken place during this period. The third and final part of the thesis explores the implications of these changes, first, for Canadian defence firms and, second, for the Canada-United States defence economic relationship.

Broadly speaking, this thesis makes two arguments. The first is that post-Cold War changes in the United States defence market and defence industrial base will have a major impact on both the number and the types of opportunities available to Canadian defence firms in the American market. The second is that these changes - and, in particular, the growing tendency of the US government to view defence

production and trade in economic as well as in military and political terms - may also have important implications for the established pattern of defence economic relations between Canada and the United States. However, despite these implications, this thesis contends that the strong political, economic, and military ties between the two countries should prevent any serious breakdown of the bilateral relationship.

Introduction

In its 1994 *Defence White Paper*, the Canadian government highlighted the importance of Canada-United States defence economic cooperation – and, in particular, the Defence Production and Defence Development Sharing Arrangements (DD/DPSA) between the two countries – in supporting the Canadian defence industrial base and in generating and sustaining high-technology jobs in the defence and civilian sectors.¹ Citing the small size of the Canadian defence market as well as the obvious benefits of Canada's access to the American market, the government observed that this cooperation is even more important in the current era of "diminished resources and increased competition."² What the *White Paper* failed to acknowledge, however, was that since the end of the Cold War and the breakup of the Soviet Union, United States defence industrial policies and corporate strategies have begun to change and that this could have important implications not only for Canadian defence firms but also for the established pattern of defence economic cooperation between Canada and the United States.

¹Department of National Defence, *1994 Defence White Paper*, (Ottawa, ON: Supply and Services Canada), p. 24.

²*Ibid.*

This thesis will explore the evolution of the Canada-United States defence economic relationship from 1940 to the present, focusing, in particular, on the period since the end of the Cold War. Its main objective will be to assess the implications of post-Cold War changes in the United States defence market and defence industrial base for Canadian defence firms and for the Canada-United States defence economic relationship. Broadly speaking, it will make two arguments. The first is that post-Cold War changes in the United States defence market and defence industrial base will have a major impact on both the number and the types of opportunities available to Canadian defence firms in the American market. The second is that these changes - and, in particular, the growing tendency of the US government to view defence production and trade in economic as well as in military and political terms - may also have important implications for the established pattern of defence economic relations between Canada and the United States. However, despite these implications, this thesis will contend that the strong political, economic, and military ties between the two countries should prevent any serious breakdown of the bilateral relationship.

This exploration of the Canada-United States defence economic relationship, with its focus on the future of the

Canadian defence industrial base, is important for several reasons. One reason is that although the impact of the Canadian defence industrial base is rather limited in gross economic terms, it is clearly significant within certain industries (shipbuilding and aerospace, for example) and geographic regions. This significance, combined with the highly skilled nature of the jobs involved, makes the Canadian defence industrial base a segment of the country's economy worthy of investigation. Another reason for the importance of this exploration is that despite the potential implications of post-Cold War changes in the US defence market and defence industrial base for Canadian defence firms and for the Canada-United States defence economic relationship, there has been little scholarly work done on the subject.³ This is both surprising and disturbing given the importance of the American defence market for Canadian defence firms and for the continued viability of the Canadian defence industrial base.

In terms of its structure, this thesis will be divided into three chapters. The first chapter will explore the

³Two notable exceptions are Alistair D. Edgar and David G. Haglund, *The Canadian Defence Industry in the New Global Environment*, (Montreal, PQ: McGill-Queen's University Press, 1995) and Michael Slack and John Skynner, "Defence Production and the Defence Industrial Base," in David B. Dewitt and David Leyton-Brown, eds., *Canada's International Security Policy*, (Scarborough, ON: Prentice Hall Canada, Inc., 1995).

evolution of the Canada-United States defence economic relationship from the Ogdensburg Declaration of 1940 to the establishment of the North American Defence Industrial Base Organization (NADIBO) in 1987. It will draw attention to a number of important milestones in this evolution, including the early arrangements which provided the foundation for the relationship as well as later ones which both reaffirmed and extended its basic principles. It will also reflect on the nature of the relationship - its strengths and weaknesses - and on the conditions that gave rise to and supported its development.

Through this exploration, this chapter will make two arguments. The first is that throughout its evolution, the Canada-United States defence economic relationship was underpinned by two distinct sets of interests: Canadian economic interests and American military-security interests. Although these interests were not identical, they were perceived by both governments to be complementary. The second argument is that while this shared perception was sometimes challenged by changes in military, economic, and/or political conditions, it was sustained throughout this period by the relatively constant threat of conventional and nuclear war with the Soviet Union and by the impact of this threat on American interests.

The second chapter will explore current changes in the US defence market and defence industrial base, highlighting, in particular, those changes that are most likely to affect the established pattern of defence economic cooperation between Canada and the United States. It will be divided into three parts. The first part will describe the military, economic, and political factors and trends that are currently reshaping the United States defence industrial environment. These factors and trends include, *inter alia*, the end of the Cold War and the breakup of the Soviet Union, the increase in ethnic and regional conflicts around the world, declining US defence spending, changes in US military planning, the drop in worldwide weapons sales, and the perceived decline of the American economy.

The second part of the chapter will address the effects of these various factors and trends on United States defence industrial policy. In particular, it will look at a number of policy initiatives adopted by the Clinton Administration since its 1992 election. It will argue that these initiatives – which include, most notably, efforts to break down the barriers between defence and commercial industries – reflect, first, a change in the focus and objectives of United States defence industrial base planning brought about by the end of the Cold War and, second, a broad effort to improve

"budgetary, employment, trade, and overall economic performance."⁴ It will further argue that these policy initiatives could significantly reshape the United States defence market and defence industrial base over the next few years.

The third and final part of the chapter will address the effects of the changing United States defence industrial environment on the structure and activities of the defence industrial base. More specifically, it will look at the different ways in which American firms have responded to the decline in domestic defence spending - and, in particular, to the sharp cuts in procurement - arguing that the overall effect of these responses has been to concentrate arms production among a smaller and smaller group of companies.⁵ This concentration, it will contend, has had a particularly negative impact on the United States subcontractor base.

The third chapter will assess the implications of these changes in the US defence market and defence industrial base for Canadian defence firms and for the Canada-United States defence economic relationship. Because the nature of these implications will be shaped, to a significant extent, by the

⁴David Buxton, *Changes in the US Defence Market*, US Market Information Report No. 3, (Washington, DC: Canadian Embassy, April 1994), p. 1.

⁵*Ibid.*, p. 10.

distinctive characteristics of the Canadian defence industrial base, the first part of the chapter will provide a brief description of these characteristics. Based on this description, it will then identify some of the key strengths and weaknesses of the Canadian defence industrial base, noting, in particular, the ways in which Canada has benefited from its 'special access' to the American defence market.

The second part of the chapter will consider the implications of current changes, first, in US defence industrial policies and, second, in American corporate strategies both for Canadian defence firms and for the Canada-United States defence economic relationship. Recognizing that a number of these changes have only begun to be discussed and/or implemented and thus, that there is still a considerable amount of uncertainty regarding their potential effects, it will make two main arguments. The first is that these changes will have a major impact on both the number and the types of opportunities available to Canadian defence firms in the American market. The second is that these changes - and, in particular, the growing tendency of the US government to view defence production and trade in economic as well as in military and political terms - may also have important implications for the established pattern of defence economic relations between Canada and the United States.

Although this chapter will focus primarily on the challenges facing Canadian defence firms as a result of current changes in the US defence market and defence industrial base, it will also highlight the opportunities that have been created by these changes, stressing that even after a decade of cuts, the American market remains a huge and attractive one for Canadian producers. Moreover, it will emphasize that while the pattern of Canada-United States defence economic cooperation may change as a result of emerging American views on defence production and trade, the strong political, economic, and military ties between the two countries should prevent any serious breakdown of the bilateral relationship.

Chapter One

The Evolution of the Canada-United States Defence Economic Relationship

Introduction

The Canada-United States defence economic relationship is described throughout the literature as a long-standing and highly successful pattern of cooperation. It has evolved through more than five decades of changing military, economic, and political conditions and is currently one of the most comprehensive bilateral defence production and trade relationships in the world.¹ Its "complex web" of formal agreements, informal understandings, procedures, and regulations "embraces virtually all aspects of defence development, production, and industrial readiness."² Before exploring current changes in the US defence market and defence industrial base and their effects on this established pattern of cooperation, it is necessary to trace the evolution of the Canada-United States defence economic relationship, drawing attention to a number of important milestones in its

¹Michael Slack and John Skynner, "Defence Production and the Defence Industrial Base," in David B. Dewitt and David Leyton-Brown, eds., *Canada's International Security Policy*, (Scarborough, ON: Prentice Hall Canada Inc., 1995), p. 369.

²Danford W. Middlemiss, "The Road From Hyde Park: Canada-US Defence Economic Cooperation," paper presented at "The Road From Ogdensburg: Fifty Years of Canada-US Defense Cooperation" Conference, St. Lawrence University, Canton, New York, 16-17 August 1990, pp. 35-36.

historical development. These milestones include the early arrangements which provided the foundation for the relationship as well as later ones which both reaffirmed and extended its basic principles. It is also necessary to reflect on the characteristics of the relationship - its strengths and weaknesses - and on the conditions that gave rise to and supported its development. These factors help to explain not only the longevity and success of the bilateral relationship but also its persistent problems. As a result, they provide important insights into the future of Canada-United States defence economic cooperation in the post-Cold War era.

This chapter will trace the evolution of the Canada-United States defence economic relationship from the Ogdensburg Declaration of 1940 to the establishment of the North American Defence Industrial Base Organization (NADIBO) in 1987, highlighting, in particular, the Defence Production and Defence Development Sharing Arrangements (DD/DPSA) signed in 1956 and 1963 respectively. In so doing, it will make two main arguments. The first is that throughout its evolution, the Canada-United States defence economic relationship was underpinned by two distinct sets of interests: Canadian economic interests and American military-security interests. Although these interests were not identical, they were

perceived by both governments to be complementary. The second argument is that while this shared perception was sometimes challenged by changes in military, economic and/or political conditions, it was sustained throughout this period by the relatively constant threat of conventional and nuclear war with the Soviet Union and by the impact of this threat on American interests.

The Evolution of the Canada-United States Defence Economic Relationship

The origins of the Canada-United States defence economic relationship are usually traced back to the Ogdensburg Declaration of 1940, which acknowledged the shared interests of Canada and the United States in matters of defence. Based on the geographic proximity of the two countries and the perception of a common external threat, this acknowledgment marked the beginning of a new era of cooperation in North American defence.³ In fact, although the Declaration itself was notably informal - a six-sentence report of the discussions between President Roosevelt and Prime Minister Mackenzie King - it is generally regarded as the point at which Canada and the United States, "for the first time in

³Danford W. Middlemiss, "Economic Defence Co-operation with the United States 1940-63," in Kim Richard Nossal, ed., *An Acceptance of Paradox: Essays in Honour of John W. Holmes*, (Toronto: CIIA, 1982), p. 87.

their historical relationship, became formal allies."⁴ In terms of specific initiatives, the Ogdensburg Declaration heralded the establishment of a Permanent Joint Board on Defence (PJBD) - the first organizational component of the relationship - to study the major problems involved in the defence of North America.⁵ Although the study of 'material' problems was included in the mandate of the PJBD, the economic aspects of the relationship were not directly addressed until the following year.

It was the Hyde Park Agreement of 1941 that first recognized defence economic cooperation as an important part of the bilateral relationship and committed the two governments to collaboration in defence production and trade. Although it was initiated primarily to help alleviate Canada's balance-of-payments problem *vis-a-vis* the United States, the Hyde Park Agreement emphasized the *mutual* benefits of coordinating the defence production programmes of the two countries.⁶ In particular, it noted that the mobilization of continental resources would be faster and more efficient,

⁴Robert Van Steenburg, "An Analysis of Canadian-American Defence Economic Cooperation: The History and Current Issues," in David G. Haglund, ed., *Canada's Defence Industrial Base: The Political Economy of Preparedness and Procurement*, (Kingston, ON: Ronald P. Frye & Company, 1988), p. 190.

⁵*Ibid.*, pp. 190-191.

⁶Middlemiss, "The Road...", *Op. Cit.*, pp. 3-4.

Canada's growing defence industries would be more easily supplied with needed materials, and Canadian defence production would be directed to those areas where the United States had pressing requirements. In these respects, it has been argued, the Hyde Park Agreement was the "logical economic corollary" to the Ogdensburg Declaration.⁷

In terms of its actual impact, the Hyde Park Agreement led to an unprecedented level of defence economic cooperation between Canada and the United States in the pooling of supplies, the development of complementary industrial plants, and "in [the] almost complete erasure of national boundaries for certain purposes."⁸ In addition,

[by] providing an official rationale both for United States procurement in Canada to offset the foreign exchange impact of Canadian defence purchases in the United States and for the removal of both legislative and administrative barriers – most notably the protectionist provisions of the 1933 'Buy American' Act – which hampered the access of Canadian firms to the United States defence procurement system, this [agreement] and the various arrangements later devised to implement it enabled the Canadian government to build the nucleus of a thriving defence industry on a sound financial foundation.⁹

⁷*Ibid.*, p. 4.

⁸Roger F. Swanson, "An Analytical Study of the United States/Canadian Defense Relationship as a Structure, Response and Process," (PhD Dissertation, American University, 1969), p. 16 as cited in Van Steenburg, *Op. Cit.*, p. 191.

⁹Middlemiss, "Economic Defence...", *Op. Cit.*, p. 88.

The Hyde Park Agreement was also important in that it established the basic framework for the emerging pattern of Canada-United States defence economic cooperation – a pattern that would be shaped not only by the military and economic interests of the two countries but also by a particular process of transborder collaboration that developed between them. Put simply, the Hyde Park Agreement was an informal statement of principle rather than a formal treaty and, as such, contained no provisions for implementing machinery. Consequently, its implementation depended in large part on “the close cooperation, goodwill, and problem-solving ingenuity of administrative officials who were responsible for fleshing out the details of the agreement on both sides of the border.”¹⁰ This process of transborder collaboration – which would continue throughout the evolution of the relationship – enabled problems to be dealt with on a regular and informal basis by defence officials of the two countries, thus largely preventing the politicization of the defence economic relationship.¹¹

¹⁰Middlemiss, “The Road...”, *Op. Cit.*, p. 4.

¹¹Defence officials attempted to prevent the politicization of the Canada-United States defence economic relationship, first, by retaining tight control over access to the process and, second, by being careful to adhere to the long-standing ‘rules of the game’ pertaining to defence economic cooperation. See Middlemiss, “The Road...”, *Op. Cit.*, pp. 39-40.

With the end of World War II and the concomitant changes in both military and economic conditions, the Canada-United States defence economic relationship faced a period of transition. Joint agencies were disbanded and their administrative officials dispersed, provisions of the 'Buy American' Act were reinstated by the US government, and a protectionist sentiment became evident in both the US Congress and industrial sector.¹² However, this period proved to be short-lived when the emergence of the Cold War refocused US government attention on the shared military-security interests of Canada and the United States and, more importantly, on the need for bilateral defence cooperation to counter the Soviet threat.¹³ In a 1947 agreement between the two countries, it was recognized that this bilateral defence cooperation would require "consultation and cooperation on issues of rearmament, military equipment standardization, and defence industrial preparedness."¹⁴

Accordingly, during the late-1940s, Canada and the United States took a number of steps designed to further their

¹²Van Steenburg, *Op. Cit.*, p. 193.

¹³Middlemiss, "The Road...", *Op. Cit.*, p. 6.

¹⁴"Joint Statement By the Governments of Canada and of the United States of America Regarding Defence Cooperation Between the Two Countries," (12 February 1947), *Canada Treaty Series*, 1947, No. 43 as cited in Middlemiss, "The Road...", *Op. Cit.*, p. 6.

bilateral defence economic relationship. Although, like earlier arrangements, many of these steps were initiated by the Canadian government in order to help alleviate Canada's balance-of-payments problem *vis-a-vis* the United States, they were supported by the US government on the basis of American Cold War military-security interests. Simply stated, there was a recognition that if "Canada [were] to make an effective contribution to joint defence, consideration would have to be made in the United States for the economic factors involved."¹⁵ This recognition led to the establishment of a new programme of reciprocal defence procurement by the Permanent Joint Board on Defence. The objectives of this programme, which were similar to those of Hyde Park, included

the dispersal of North American industrial capacity to minimize the effects of a Soviet surprise attack, the establishment of specialized sources of supply in Canada to supplement United States sources, the implementation of the shared goal of standardization by providing foreign exchange (through United States purchases of Canadian defence products) to allow Canada to procure American-type military equipment, and the maintenance of a balance of trade in arms between the two countries.¹⁶

Despite this new programme, however, Canada-United States defence economic cooperation between 1945 and 1950 remained

¹⁵Van Steenburg, *Op. Cit.*, p. 193.

¹⁶Middlemiss, "Economic Defence...", *Op. Cit.*, p. 90.

quite limited.¹⁷ It only began to increase with the outbreak of the Korean War.

The Korean War, it has been argued, "greatly accentuated the bilateral significance of defence economic issues for the two governments."¹⁸ It transformed "Western perceptions of the scope, immediacy, and intensity of the Soviet threat to Western Europe and North America" and, as a result, led both Canada and the United States to expand their defence production programmes and to recognize the need to accelerate the process of bilateral defence economic cooperation.¹⁹ In an exchange of notes between the United States Secretary of State and the Canadian Ambassador in October 1950, the two governments produced a *Statement of Principles for Economic Cooperation* which essentially reaffirmed the principles of the Hyde Park Agreement and, more importantly, included the arrangements necessary to implement those principles.²⁰ Although these arrangements served the interests of both

¹⁷Middlemiss, "The Road...", *Op. Cit.*, p. 8.

¹⁸Middlemiss, "Economic Defence", *Op. Cit.*, p. 91.

¹⁹*Ibid.*

²⁰Van Steenburg, *Op. Cit.*, p. 193. "The two key principles of this agreement were: to exchange freely the technical knowledge and productive skills involved in what was considered to be essential production; and to remove, as far as practicable, the barriers which impede the flow between Canada and the United States of goods essential for the common defence effort."

countries during this period of rearmament, they were particularly beneficial for Canada and for the development of the Canadian defence industrial base. As one author notes,

United States defence procurement agencies developed an awareness of Canadian industry's capacity to function as an alternate source of supply, and Canada's Department of National Defence (DND) was increasingly able to rely on Canadian suppliers to satisfy its equipment requirements. Further, once restrictions on the cross-border flow of defence goods had been removed, Canada's perennial balance-of-payments worry disappeared; US military spending in Canada rose steadily, and by the end of the Korean War defence trade between the two countries was approximately balanced.²¹

As a result of these changes, the Canadian defence industrial base experienced a period of rapid growth. It began to produce "a greater quantity and wider range of sophisticated military equipment than ever before, especially in the electronics and aviation fields."²² This growth contributed to two important developments. The first was the creation, in 1951, of the Department of Defence Production (DDP), a civilian-controlled procurement agency with specialized skills and functions set up to direct Canada's rearmament programme.²³ The second and more significant

²¹Middlemiss, "The Road...", *Op. Cit.*, p. 10.

²²*Ibid.*, p. 13.

²³William Johnston, "Canadian Defence Industrial Policy and Practice: A History," *Canadian Defence Quarterly* Vol. 18, No. 6, Special Edition No. 2 (June 1989), p. 25.

development was a decision by the Canadian government to foster a self-sustaining defence industry in Canada.

Although this period in the evolution of the Canada-United States defence economic relationship was shaped, in part, by the goodwill and close cooperation of the defence officials of the two countries, it was based primarily on the existence of a clear and pressing military threat. Consequently, when the Korean War ended, both governments began to focus on domestic political and economic issues and reverted to their former protectionist procurement practices. As a result, bilateral defence economic cooperation decreased despite a 1953 agreement which reaffirmed the 1950 *Statement of Principles* and assured Canada "preferred treatment from the United States on defence production and trade issues."²⁴ The Canada-United States defence economic relationship did continue, however, as a result of the continued threat posed by the Soviet Union - a threat that was renewed by the Soviet detonation of a hydrogen bomb in 1953.

In the aftermath of the Korean War, defence economic cooperation between Canada and the United States was limited, creating a major challenge for Canadian defence industries. These industries "had developed a substantial capacity to produce military equipment, yet the largest prospective market

²⁴Middlemiss, "The Road...", *Op. Cit.*, p. 12.

for this equipment, the United States, was for the most part inaccessible."²⁵ In order to preserve the productive capacity of its domestic defence industries, the Canadian government embarked on a policy of developing an industrial base "capable of producing a limited variety of specialized defence products for the Canadian armed forces."²⁶ The implementation of this policy involved an extensive programme of government assistance to certain sectors of the Canadian defence industrial base. The chief beneficiary of this programme was the aircraft industry. Government involvement in this industry, it is said, reflected "the changing emphasis of federal policies toward the defence industry as a whole, with the original military rationale for this support being supplanted by economic and political considerations."²⁷

Despite this shift in government policy, the Canada-United States defence economic relationship remained important for Canada and for the continued viability of the Canadian defence industrial base. It became increasingly important when, in February 1959, political and economic difficulties led to the cancellation of the CF-105 Arrow fighter aircraft programme, the centrepiece of the new government policy. The

²⁵Middlemiss, "Economic Defence...", *Op. Cit.*, p. 94.

²⁶*Ibid.*

²⁷*Ibid.*

failure of this programme "demonstrated that independent development and production of modern weapons systems could no longer be matched to Canada's limited defence budgets and requirements."²⁸ With its cancellation, "Canada essentially foreclosed the option of maintaining and developing a self-sufficient defence industry."²⁹ Instead, the Canadian government decided to further the integration of Canada's defence industries into the United States defence industrial base.

The groundwork for this integration had been laid even before the cancellation of the fighter aircraft programme and was embodied in the Defence Production Sharing Arrangements (DPSA) of 1956. The conclusion of these arrangements - which were approved by the United States President in December 1958 and authorized by the US Department of Defense (DoD) in July 1960 - coincided not only with the cancellation of the Arrow but also with the creation of the North American Air Defence Command (NORAD) and with discussions regarding Canadian participation in the development and production of the Bomarc anti-aircraft guided missile and the Semi-Automatic Ground

²⁸Middlemiss, "The Road...", *Op. Cit.*, p. 14.

²⁹Martin Shadwick, ed., *The Canadian Defence Industry Guide*, (Toronto: Baxter Publishing, 1992), p. 7.

Environment (SAGE) control system.³⁰ Thus, it was the "military and economic pressures stemming from both the NORAD agreement and the Arrow decision [that] created the immediate context for the conclusion of the DPSA."³¹

Broadly speaking, the DPSA set out two main objectives for production sharing. These objectives were described as follows in a 1958 DDP report:

The immediate objective is to increase the participation of Canadian industry in the production and support of North American defence weapons and equipments. The continuing long-term objective is to coordinate the defence requirements, development, production and procurement of the two countries in order to achieve the best use of their respective production resources for their common defence, in line with the concept of interdependence and the integration of military arrangements.³²

In more specific terms, the DPSA was designed to increase Canada's participation in the production and supply of components and sub-components, thus enabling the Canadian government to finance its purchases of major weapons systems from the United States. In order to achieve this objective, the arrangements stipulated that "Canadian industry would have equal opportunity to compete with US industry for US

³⁰Van Steenburg, *Op. Cit.*, p. 195.

³¹*Ibid.*

³²Cited in Middlemiss, "Economic Defence...", *Op. Cit.*, p. 96.

defence contracts on the normal commercial basis of price, quality, and delivery."³³ To ensure this opportunity, the United States government eliminated 'Buy American' Act restrictions for a wide range of Canadian supplies for US defence programmes and, in addition, changed its regulations to allow Canadian defence products to enter the United States duty free.³⁴ At the same time, however,

while granting unrestricted access to the Canadian market for major weapons systems, Canada maintained its own tariffs (until 1966) as an inducement for Canadian firms to keep subcontracting activity in Canada, and continued a number of other measures such as a ten-percent domestic price preference in order to ensure that Canadian firms would continue to be awarded contracts regardless of their economic competitiveness.³⁵

The non-reciprocal nature of the DPSA reflected the different, yet complementary, interests of the two countries in bilateral defence economic cooperation. For the United States, the primary motivation for production sharing was its

³³R.B. Byers, "Canadian Defence and Defence Procurement: Implications for Economic Policy," in Denis Stairs and Gilbert R. Winham, eds., *Selected Problems in Formulating Foreign Economic Policy*, (Toronto: University of Toronto Press, 1985), p. 181.

³⁴*Ibid.*

³⁵John J. Kirton, "The Consequences of Integration: The Case of the Defence Production Sharing Agreements," in Andrew Axline, James E. Hyndman, Peyton V. Lyon, and Maureen A. Molot, eds., *Continental Community? Independence and Integration in North America*, (Toronto: McClelland & Stewart, 1974), pp. 121-122, as cited in Slack and Skynner, *Op. Cit.*, p. 372.

military-security interests. The DPSA was seen as a continuation of the existing military interdependence of the two countries and, more importantly, as a means to preserve Canada's commitment and contribution to North American defence.³⁶ Thus, it was generally viewed in terms of "supporting integrated military planning with Canada, broadening the base of assured suppliers through dispersal of production facilities, and establishing supplementary sources of supply."³⁷ In contrast, for Canada, the primary motivation for production sharing was its economic interests. The DPSA was seen as a way both to maintain the viability of the Canadian defence industrial base and to enable the government to pursue broad economic objectives such as regional and industrial development. Consequently, the arrangements were viewed by the Canadian government in terms of their "commercial impact, giving Canadian firms access to the American defence market."³⁸

The next major developments in the Canada-United States defence economic relationship took place in 1963. The first

³⁶Van Steenburg, *Op. Cit.*, p. 196.

³⁷David Leyton-Brown, "The Impact of European Market Integration on Canadian-American Defence Industrial Cooperation," *Canadian Defence Quarterly* Vol. 20, No. 4, Special Edition No. 1 (February 1991), p. 34.

³⁸*Ibid.*

of these developments was an addition to the DPSA in which the two governments agreed to "the objective of a long-term balance in the reciprocal production of defence equipment between the two countries."³⁹ This agreement essentially "offered a guarantee to the United States that Canada would purchase US major weapons systems under certain conditions, and to Canada that its purchases would be matched by sales from Canadian firms of components and subsystems to the United States."⁴⁰ In addition, by exempting Canadian firms from import duties and from 'Buy American' Act restrictions while allowing duties on US imports into Canada, this agreement reinforced the asymmetrical nature of the relationship.⁴¹ The second major development that took place in 1963 was the establishment of the Defence Development Sharing Programme.

Although the DPSA and its associated arrangements had significantly increased Canadian access to the United States procurement system, Canadian firms continued to have problems acquiring a fair share of DoD's research and development (R&D) contracts. This situation was problematic for Canadian firms because, as one author points out, "participation in this early phase of US military procurement programs was usually

³⁹Slack and Skynner, *Op. Cit.*, p. 372.

⁴⁰*Ibid.*, p. 373.

⁴¹*Ibid.*

crucial to gaining the follow-on production contracts."⁴² Thus, as early as 1959, Canadian officials had begun to pursue a programme of R&D sharing with the United States that would complement the production sharing arrangements. The outcome of these pursuits was a 1963 Memorandum of Understanding (MOU) between the two governments outlining the Defence Development Sharing Programme.

The provisions of the DDSA served to advance both Canadian economic interests and American military-security interests. With regard to the former, by requiring a minimum twenty-five percent funding contribution by the US DoD, the agreement reduced Canadian R&D costs and gave the United States government a vested interest in the success of joint development projects. This effectively increased the competitiveness of Canadian defence firms in the United States market.⁴³ With regard to the latter, by promoting greater standardization and interchangeability of equipment and by stipulating that DoD would not duplicate Canadian R&D efforts unless it was in the national interest to do so, the DDSA promised the more effective utilization of the resources

⁴²Middlemiss, "The Road...", *Op. Cit.*, p. 22.

⁴³Middlemiss, "Economic Defence...", *Op. Cit.*, p. 105. See also Slack and Skynner, *Op. Cit.*, p. 373.

of the two countries.⁴⁴

Although the development of the DD/DPSA unquestionably strengthened Canada-United States defence economic relations during this period, changes in military and economic conditions occasionally challenged the basis of the bilateral relationship. For example, in the early 1960s, the pattern of cooperation between the two countries was threatened by the "apparent diminution of Canadian support for US foreign and defence policies."⁴⁵ The two issues that were of particular significance were Diefenbaker's hesitant endorsement of President Kennedy's handling of the Cuban missile crisis and Canada's delay in acquiring nuclear warheads for its NATO and NORAD forces.⁴⁶ These issues unsettled the balance of interests that had shaped the defence economic relationship throughout its evolution – a balance between Canadian economic interests and American military-security interests. Simply stated, the United States had been willing to grant Canada economic concessions but linked these concessions to Canadian involvement in NORAD and, more specifically, in the defence of the North American continent.

⁴⁴*Ibid.* See also Slack and Skynner, *Op. Cit.*, p. 373.

⁴⁵Middlemiss, "The Road...", *Op. Cit.*, p. 20.

⁴⁶*Ibid.*

A more serious threat to the bilateral defence economic relationship arose in the late-1960s as a result of United States military involvement in Vietnam. As the US became increasingly involved in the conflict, the demand for Canadian defence goods increased dramatically, thus reversing the historic US surplus in defence trade.⁴⁷ Between 1965 and 1971, Canada had a favourable defence trade balance with the United States of almost \$500 million.⁴⁸ This resulted in a significant shift in American interests with regard to the defence economic relationship with Canada. Faced not only with a defence trade imbalance but also with a mounting worldwide balance-of-payments deficit, the United States government began to focus increasingly on its economic interests. It pressed for greater Canadian defence procurement in the United States, the elimination of tariffs, and the removal of the ten percent preference accorded Canadian defence suppliers.⁴⁹ More importantly, it began to view the DD/DPSA as a trade irritant which "unfairly and adversely" affected the United States balance-of-payments position.⁵⁰

⁴⁷Slack and Skynner, *Op. Cit.*, p. 373.

⁴⁸Johnston, *Op. Cit.*, p. 26.

⁴⁹Middlemiss, "The Road...", *Op. Cit.*, p. 28. See also Slack and Skynner, *Op. Cit.*, p. 373.

⁵⁰*Ibid.*, p. 27.

This view reflected a number of changes in the American approach to defence economic cooperation with Canada. First, although defence economic issues had traditionally been kept separate from other trade issues and had been dealt with at low bureaucratic levels, they were now viewed by the US government as part of a 'package' of trade issues – a package that attracted the attention of both the United States Treasury and Commerce Departments.⁵¹ Second, although the US government had formerly supported the bilateral defence economic relationship on the basis of American military-security interests, it was now increasingly concerned with the domestic economic impact of the production and development sharing arrangements. As one author notes, the arrangements had come to be viewed as a "negotiable part of a larger trade package, and the conditions for evaluating the arrangements were shifted, with the emphasis no longer on defence, but rather on economic benefits."⁵²

This 'trade irritant' dispute – which was an exception to the generally smooth and conflict-free history of Canada-United States defence economic cooperation – began to subside as American involvement in Vietnam declined and the defence

⁵¹*Ibid.*, p. 28. See also Van Steenburg, *Op. Cit.*, p. 203.

⁵²Van Steenburg, *Op. Cit.*, p. 203.

trade balance once again shifted in favour of the United States.⁵³ It was against the backdrop of the Reagan Administration's emphasis on military preparedness and increased defence spending that the next major milestone in the bilateral relationship occurred.⁵⁴ This milestone was the 1985 Quebec City Summit during which President Reagan and Prime Minister Mulroney reaffirmed the importance of the DD/DPSA and agreed to work together to increase Canadian access to the American defence market, stimulate the two-way flow of defence goods, and strengthen the North American defence industrial base.⁵⁵ The two leaders declared that,

[r]ecognizing the importance of access to, and participation of, Canadian firms in the US defence market, we will work to reduce barriers, and to stimulate the flow in defence goods. We will seek to improve our joint access to information relating to defence procurement; we will explore ways to establish a separate designation for mobilization base suppliers for US and Canadian firms, and we will seek to take greater advantage of flexibility inherent in second source suppliers. We will also undertake to establish a freer exchange between both countries of technical knowledge and skills involved in defence production, in order to facilitate defence economic and trade cooperation

⁵³Middlemiss, "The Road...", *Op. Cit.*, p. 28.

⁵⁴For a further discussion of changes in United States defence policy under Reagan, see Lawrence Freedman, *The Evolution of Nuclear Strategy*, Second Edition, (New York: Macmillian Press, 1990).

⁵⁵Slack and Skynner, *Op. Cit.*, p. 374.

and joint participation in major defence programs.⁵⁶

This declaration paved the way for a number of measures, the most important of which was the establishment of a formal North American Defence Industrial Base Organization in 1987.⁵⁷ This organization - which was given the task of promoting "the development, effectiveness, coordination and industrial responsiveness of DoD and DND industrial preparedness programs"⁵⁸ - serves as an inter-governmental as well as a government-industry forum for the exchange of information. In so doing, it "recognizes the integrated nature of the two defence industrial bases and ensures Canadian involvement in defence industrial base planning."⁵⁹

Despite the many notable achievements in the history of Canada-United States defence economic cooperation, it is important to note that there have also been a number of persistent problems. For Canada, the most serious problem

⁵⁶"Declaration by the Prime Minister of Canada and the President of the United States of America Regarding International Security," (Quebec City, 18 March 1985) as cited in Middlemiss, "The Road...", *Op. Cit.*, p. 33.

⁵⁷Middlemiss, "The Road...", *Op. Cit.*, p. 34. Other measures include Canada-United States memoranda of understanding on strategic technology exchange (13 December 1985), on terms of reference for a Joint Certification Program (6 June 1986), and concerning combined logistics support (23 March 1987).

⁵⁸*Ibid.*

⁵⁹Slack and Skynner, *Op. Cit.*, p. 374.

has been the existence of numerous non-tariff and other barriers in the United States that serve to restrict Canadian access to the American defence market. Of particular concern has been the United States Small Business Set Asides Act which reserves a certain portion of DoD procurement contracts for bids by American small and disadvantaged businesses. This legislation, some have argued, has been particularly harmful to Canada's defence industries because most Canadian firms are of small and medium size.⁶⁰

From the American perspective, one of the most destabilizing issues has been Canada's policy of requiring large, project-specific 'offsets' in its major offshore weapons procurement programmes.⁶¹ These offsets have been used by the Canadian government to provide a wide-range of benefits both for the economy in general and for the defence industrial base in particular. The United States government has opposed this policy, at least since the early-1970s, arguing that the defence sharing arrangements "already constitute an offset program - one in which Canada enjoys a favoured status."⁶² This argument reflects a more serious concern within the United States government regarding the general lack of reciprocity in

⁶⁰Van Steenburg, *Op. Cit.*, p. 204.

⁶¹Middlemiss, "The Road...", *Op. Cit.*, p. 30.

⁶²*Ibid.*, p. 31.

the bilateral defence economic relationship - a concern that has begun to increase in the period since the end of the Cold War.

Concluding Remarks

By tracing the evolution of the Canada-United States defence economic relationship from the Ogdensburg Declaration of 1940 to the establishment of the NADIBO in 1987, this chapter has made several things clear. The first is that the interests of the two countries in bilateral defence economic cooperation were, throughout most of the post-war era, quite distinct. Canada's interests were primarily economic (the retention of a viable domestic defence industrial base), while the interests of the United States were primarily military (the preservation of Canada's commitment and contribution to North American defence). The strength of the relationship lay in the fact that while these interests were not identical, they were perceived by both governments to be complementary.

The second thing that this chapter has made clear is that although this shared perception was sometimes challenged by changes in military, economic and/or political conditions - most notably, the reversal of the US surplus in defence trade that occurred during the Vietnam War - it was sustained throughout this period by the relatively constant threat of

conventional and nuclear war with the Soviet Union. This threat led, in the United States, to the subordination of domestic economic interests to military-security goals. It also led to a particular type of US defence industrial base planning characterized by large peacetime requirements and, ultimately, massive mobilization requirements for a European war. These requirements "implied the need to call on a wide range of industrial resources, including reliable offshore support, particularly that resident in Canada."⁶³ It was on the basis of this type of planning that the US government supported defence economic cooperation with Canada and, more importantly, agreed to certain economic concessions. Consequently, the end of the Cold War raises a number of questions about the future of Canada-United States defence economic relations. These questions will be the focus of the following two chapters.

⁶³Slack and Skynner, *Op. Cit.*, p. 381.

Chapter Two

The End of the Cold War and the Transformation of the US Defence Market and Defence Industrial Base

Introduction

For most of the post-war era, United States defence industrial base planning has been focused on the perceived threat of conventional and nuclear war with the Soviet Union. This focus, as discussed in the previous chapter, has been central both to the evolution of the Canada-United States defence economic relationship and to the development of the Canadian defence industrial base. However, with the end of the Cold War and the breakup of the Soviet Union, this focus has been fundamentally changed. The objective of United States defence industrial base planning has shifted from a plan for "a massive mobilization effort based on a protracted conflict in the European theatre" to "a concern over retaining vital industrial and technological capabilities, and an ability to constitute others required under conflict conditions."¹ This shift, combined with several other military, economic, and political factors and trends, has led to a number of changes in the US defence market and defence industrial base - changes which have important implications

¹Michael Slack and John Skynner, "Defence Production and the Defence Industrial Base," in David B. Dewitt and David Leyton-Brown, eds., *Canada's International Security Policy*, (Scarborough, ON: Prentice Hall Canada Inc., 1995), p. 381.

for Canadian defence firms and for the Canada-United States defence economic relationship.

This chapter will explore current changes in the US defence market and defence industrial base, highlighting, in particular, those changes that are most likely to affect the established pattern of defence economic cooperation between Canada and the United States. It will be divided into three parts. The first part of the chapter will describe the military, economic, and political factors and trends that are currently reshaping the United States defence industrial environment. These factors and trends include, *inter alia*, the end of the Cold War and the breakup of the Soviet Union, the increase in ethnic and regional conflicts around the world, declining US defence spending, changes in US military planning, the drop in worldwide weapons sales, and the perceived decline of the American economy. Although a detailed examination of these various factors and trends is beyond the scope of this chapter, it is necessary, prior to exploring current changes in the US defence market and defence industrial base, to provide a brief description of the environment in which these changes are taking place.

The second part of the chapter will address the effects of these factors and trends on United States defence industrial policy. In particular, it will look at a number of

policy initiatives adopted by the Clinton Administration since its 1992 election. It will argue that these initiatives - which include, most notably, efforts to break down the barriers between defence and commercial industries - reflect, first, a change in the focus and objectives of United States defence industrial base planning brought about by the end of the Cold War and, second, a broad effort to improve "budgetary, employment, trade, and overall economic performance."² It will further argue that these policy initiatives could significantly reshape the US defence market and defence industrial base over the next few years.³

The third part of the chapter will address the effects of the changing United States defence industrial environment on the structure and activities of the defence industrial base. More specifically, it will look at the different ways in which US firms have responded to the decline in domestic defence spending - and, in particular, to the sharp cuts in procurement - arguing that the overall effect of these

²David Buxton, *Changes in the US Defence Market*, US Market Information Report No. 3, (Washington, DC: Canadian Embassy, April 1994), p. 1.

³It is important to note that the US defence market and defence industrial base have already been significantly transformed as a result of the decline in United States defence spending and, in particular, as a result of the sharp cuts in procurement that took place between FY 1985 and FY 1995.

responses has been to concentrate arms production among a smaller and smaller group of firms.⁴ This concentration, it will contend, has had a particularly negative impact on the United States subcontractor base.

The Current United States Defence Industrial Environment

The end of the Cold War and the breakup of the Soviet Union have had worldwide effects. For Western industrialized countries and, in particular, for the United States, the most important and celebrated of these effects has been a perceived reduction of the military threats to Western security. Put simply, many of the threats associated with the Cold War have virtually disappeared and although political instability in the former Soviet Union remains a concern, it is considered highly unlikely that "a reconstituted Soviet Union or even just a reinvigorated Russia could again, at least over the short to medium term, present the West with a conventional military threat comparable to that of the Cold War period."⁵ This change in threat perception, combined with a broad shift in national political and economic priorities, has led to demands from the US public for a so-called 'peace dividend' -

⁴Buxton, *Op. Cit.*, p. 10.

⁵Alistair D. Edgar and David G. Haglund, *The Canadian Defence Industry in the New Global Environment*, (Montreal, PQ: McGill-Queen's University Press, 1995), p. 5.

that is, for the government to transfer funds from defence to domestic social and economic programmes. Although this 'peace dividend' has for the most part remained elusive, the end of the Cold War has had a profound impact on the United States defence industrial environment. The most obvious indications of this impact have been the downsizing and restructuring of US forces and expenditures.

In recent years, there have been a number of reviews of the United States forces' roles and missions. While these reviews have emerged largely in response to changes brought about by the end of the Cold War, they have also attempted to address the emergence of new security threats including, most notably, the increase in - or at least increased prominence of - ethnic and regional conflicts around the world. To date, the most significant of these reviews has been former Defense Secretary Les Aspin's *Bottom-Up Review* (BUR), which was released in September 1993. The major conclusion of this review was that "the basic US force structure should be sized to fight two major regional conflicts, with such potential adversaries as North Korea and Iraq, nearly simultaneously."⁶ This conclusion implied a considerable downsizing of both force structures and expenditures. However, the BUR also stressed that the restructuring of US forces should "be based

⁶Buxton, *Op. Cit.*, p. 5.

on the guiding principles of readiness and technological superiority."⁷ This emphasis indicated a shift in funding priorities from procurement to operations and maintenance (O&M) accounts. Although the BUR's recommendations have been widely criticized,⁸ it is significant to note that its concepts did form the basis for the Clinton Administration's fiscal year 1995 (FY 1995) defence budget – a budget described as "the first true post-Cold War budget."⁹

Defence spending in the United States first began to fall in the mid-1980s, after peaking under the Reagan Administration in 1985. It has fallen in real terms every year since. In 1985 the defence budget accounted for 6.3 per cent of the United States gross domestic product (GDP). In FY 1995 it accounted for 3.7 per cent, the smallest proportion since before World War II. By FY 1999, the defence budget is expected to account for only 2.8 per cent of GDP.¹⁰ In dollar figures, the FY 1995 budget authorized the expenditure of \$255 billion, almost \$150 billion lower than FY 1985. It is the

⁷*Ibid.*

⁸Two major criticisms of the Bottom-Up Review were that its recommended force structures were far bigger than what was needed and that it did not deal with the duplication of roles and missions between the services.

⁹Buxton, *Op. Cit.*, p. 6.

¹⁰*Ibid.*

Clinton Administration's intention to continue downsizing until the budget reaches \$200 billion by the early 21st century.¹¹

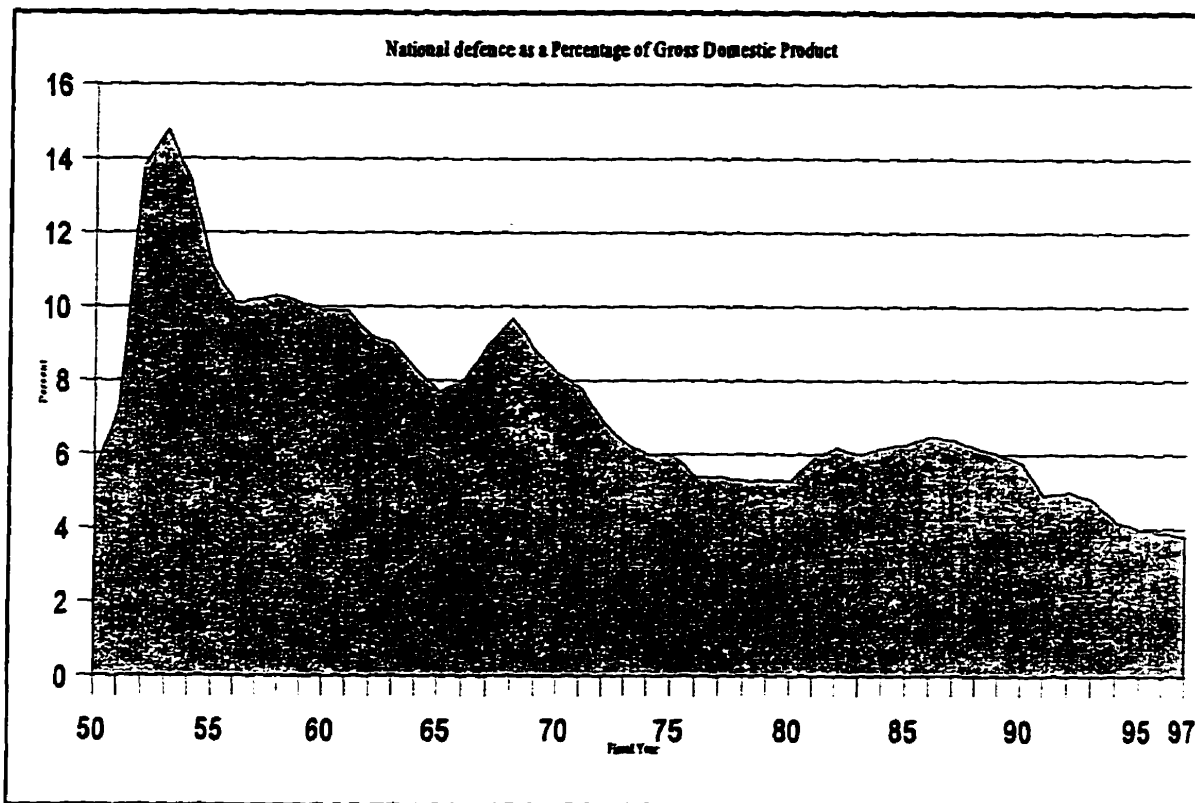
From an historical perspective, there are two main points that should be acknowledged with regard to this decline in defence spending. First, although post-Cold War reductions in the United States defence budget have been significant – in both dollars and as a percentage of GDP – the current decline in defence spending is smaller and is planned to occur at a slower rate than the reductions that followed World War II, Korea, or Vietnam (see Figure 2.1).¹² Second, although defence spending in the United States has fluctuated considerably in the period since World War II, it is widely perceived that the current decline in defence spending does not reflect “merely a short-term downturn in the post-World War II pattern.” Rather, it is argued that “the end of the Cold War has resulted in long-term restructuring of the nation's priorities for defence.”¹³ This second point is particularly significant

¹¹Richard Malloy, *The Defense Authorization Act, Fiscal Year 1995: A Commercial Perspective*, US Market Information Report No. 14, (Washington, DC: Canadian Embassy, 1995), p. 1.

¹²Department of Defense, *Adjusting to the Drawdown*, Report of the Defense Conversion Commission, (Washington, DC: US Government Printing Office, 1992), p. 10.

¹³*Ibid.*, p. 9.

Figure 2.1:
National Defence as a Percentage of Gross Domestic Product



Source: Budget of the United States Government, FY 1993, Supplement, February 1992. Washington, DC: GPO, pp. 82-88.

for the future of the US defence market and defence industrial base.

The area that has been most greatly affected by the current decline in United States defence spending is procurement. With the end of the Cold War and the breakup of the Soviet Union, the need to bring new weapons systems into production has been greatly reduced and the defence budget has

been adjusted accordingly. In FY 1995, the United States defence budget authorized the expenditure of \$43.5 billion (approximately 18 percent of the total defence budget) "for procurement for all branches of the military services and defence agencies as well as for up-grades and conversion of major weapons systems."¹⁴ Although this is a sizable amount by any standard, it is 67 per cent less than in FY 1985, the apex of the Reagan Administration's spending (see Figure 2.2).¹⁵ This decline in procurement funding has been achieved by terminating or canceling a large number of strategic and other major weapons systems - including several next-generation systems - and by what the United States Department of Defense (DoD) describes as "living off Cold War inventories."¹⁶ Recognizing that this pattern cannot continue for long, the US government has projected a moderate increase in defence procurement over the next few years. One area in which there will be considerable growth is C⁴I equipment.¹⁷

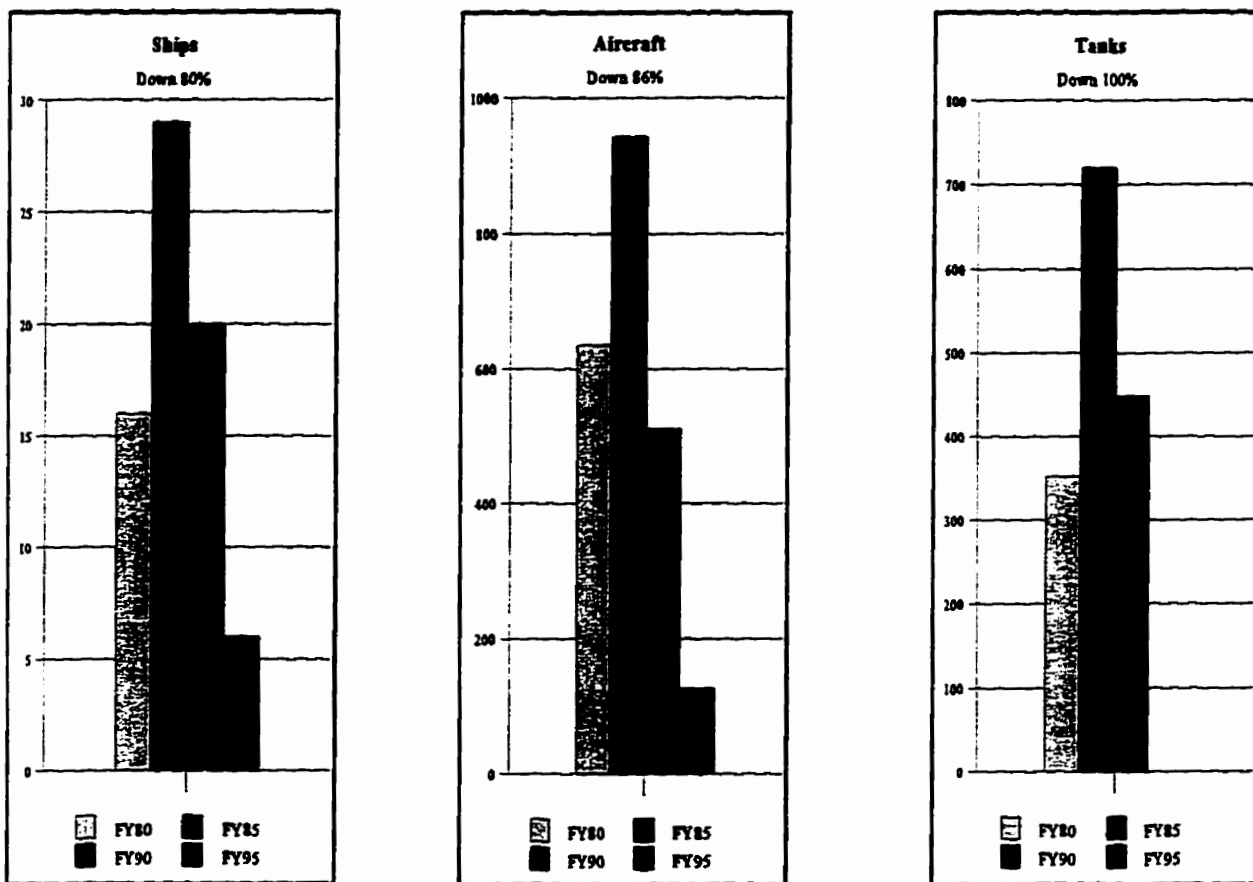
¹⁴Malloy, *Op. Cit.*, p. 2.

¹⁵*Ibid.*, p. 1.

¹⁶Buxton, *Op. Cit.*, p. 7. See also Donald Atwood, "Acquisition and Procurement for the New Strategy," *NATO's Sixteen Nations*, Vol. 37, No. 6 (1992), p. 13.

¹⁷According to Secretary of Defense Perry, defence procurement is projected to increase by 20 percent between 1996 and 1999. See Buxton, *Op. Cit.*, p. 8.

Figure 2.2: Historical Procurement Data



Source: David Buxton, *Changes in the U.S. Defence Market*, U.S. Market Information Report No. 3, (Washington, DC: Canadian Embassy, 1994), p. 7.

This decline in defence procurement has been guided by some basic changes in the United States government's procurement philosophy. Central among these are fewer new weapons systems, an increased emphasis on up-grades, and a change in the relationship between research and development (R&D) and procurement. Generally speaking, the government has taken the position that with the end of the Cold War, United States forces are now able to retain existing equipment for longer periods of time with necessary technological advances incorporated through upgrades rather than through the initiation of new systems. Accordingly, it has maintained that a commitment to the acquisition of a new weapons system will occur only when there is a definite need because of obsolescence or ageing of an existing system and then only when it is proven to be technically feasible and cost effective.¹⁸

Given this position, DoD has begun to rely increasingly on research and development, stating that it will no longer begin production before R&D is fully complete. Rather, new weapons systems will move into full production "only after technical, manufacturing, and operational risks have been minimized and performance verified."¹⁹ These changes in

¹⁸Atwood, *Op. Cit.*, p. 13.

¹⁹Buxton, *Op. Cit.*, p. 6.

procurement philosophy were reflected in the FY 1995 defence budget which, compared to FY 1994, saw research and development funding remain somewhat stable at \$36 billion (13 percent of the total defence budget) and funding for operations and maintenance increase to \$94.5 billion (34 percent of the total defence budget).²⁰

Reductions in domestic defence spending and, more specifically, in procurement and research and development funding have left the United States with an excess of defence industrial capabilities. In order to cope with this excess and to maintain a widely capable defence industrial base, the United States has become increasingly dependent on the export market. However, the value of exports has decreased in recent years and "there are few, if any, signs that the market will improve significantly in the next five- to ten-year period."²¹ In 1994, the latest year for which complete figures are available, worldwide weapons sales fell 29 per cent, to \$22-

²⁰It is significant to note that the amount allotted for Operations and Maintenance in the FY 1995 defence budget was the highest amount allotted in this category since the Vietnam War. This level of funding reflects the government's decision to modernize and upgrade existing equipment rather than purchasing new, more expensive replacements. See Malloy, *Op. Cit.*, pp. 2-4.

²¹Slack and Skynner, *Op. Cit.*, p. 376.

billion (US) from \$28.4-billion the previous year.²² This drop in weapons sales has resulted not only from the decline in defence spending throughout the West but also from other factors and trends such as the high costs of latest generation equipment, the lack of hard currency in the developing countries, and the reduction by key recipients such as Egypt, Israel and Syria.²³

For the United States, this decline in the global defence market has been further complicated by the growing regionalisation of the arms trade. In Europe, intra-European cooperation has increased in recent years, and today, nearly every Western European weapons system is based on codevelopment or coproduction agreements.²⁴ This trend toward regionalisation has restricted United States arms sales to Europe and has also increased US-European competition in Third

²²United States arms transfers worth \$12.4-billion accounted for 56 percent of the total. This was the first time US arms transfers accounted for more than half of worldwide weapons sales. Analysts say that these trends have continued since 1994 with some tapering off of US sales and some increase by France. Annual report of the Arms Control and Disarmament Agency as cited in "US Leads in Worldwide Arms Sales," *The Globe and Mail*, 4 July 1996.

²³Slack and Skynner, *Op. Cit.*, p. 376.

²⁴Eric R. Pages, "The American Business Response to Defense Cutbacks: Strategies for Adjustment and their Effects on International Defense Collaboration," paper presented at the 1994 Annual Convention of the International Studies Association, Washington, DC, 31 March 1994, p. 12.

World markets.²⁵ In Asia, growing regionalisation has not resulted in a 'Fortress Asia' to rival that in Europe; however, the absence of indigenous defence industrial bases has led Asian countries to make strict demands for coproduction and codevelopment projects. As Asian countries (especially the newly industrialized countries or NICs) develop a broader range of defence industrial capabilities, competition with the United States for new markets is likely to increase while US market opportunities in Asia may decrease.²⁶

In addition to these international factors and trends, there are also a number of domestic conditions that are currently reshaping the United States defence industrial environment, the foremost of which is a shift in American interests. In the period since the end of the Cold War, American interests, which were previously defined by the dominance of military-security issues, have shifted sharply in the direction of economics.²⁷ While this shift can be

²⁵*Ibid.*

²⁶*Ibid.* For a more detailed examination of the growing arms production capabilities in the newly industrialized countries see Ralph Sanders, *Arms Industries: New Suppliers and Regional Security*, (Washington, DC: National Defense University Press, 1990).

²⁷C. Fred Bergsten, "The Primacy of Economics," *Foreign Policy* 87 (Summer 1992), pp. 3-8.

attributed, in part, to the end of the Cold War and the concomitant reduction of military threats to Western security, it also reflects the increased salience of US domestic economic concerns. Over the past decade, the United States public has become increasingly worried about economic vulnerability as a threat to national security and has demanded that greater priority be given to American economic interests. As one study observes, "Americans want to see more and better training for workers, tougher trade policies, greater efforts to keep jobs in the United States and more attention to improving the quality of American products."²⁸ These demands are underpinned by the belief that, for the past five decades, the United States has consistently traded away its domestic economic interests for its foreign policy goals. Given this belief, the end of the Cold War has been seen as an opportunity for the United States government to focus its attention closer to home.²⁹

This shift in American interests has had a major impact on the United States defence industrial environment, particularly at a time of declining defence budgets, massive

²⁸Daniel Yankelovich, "Foreign Policy After the Election," *Foreign Affairs* (Fall 1992), p. 11.

²⁹See for example, Alfred E. Eckes, "Trading American Interests," *Foreign Affairs* (Fall, 1992), pp. 135-154, and Bergsten, *Op. Cit.*, pp. 3-24.

job losses, and increasing competition among arms-producing states. Simply stated, it has forced the US government to reassess its priorities and interests regarding the defence industrial base and to consider defence production and trade in economic as well as in military and political terms. This has prompted a number of changes in US defence industrial policy - changes which have focused on improving efficiency, enforcing reciprocity, and maintaining technological superiority at an affordable cost. Although many of these changes were first introduced by the Bush Administration and/or the Democrat-controlled Congress, they have received strong support from the Clinton Administration.

Another trend that is helping to reshape the United States defence industrial environment is the increasingly protectionist attitude of Congress with regard to the defence industrial base. Concerned primarily about the negative effects of declining US defence spending (for example, plant and base closures and the loss of defence-related jobs), Congress has, in recent years, enacted a number of bills designed both to protect US jobs and to preserve key industrial capabilities. These bills have focused, most notably, on strengthening and extending the provisions of the 'Buy-American' Act. Buy-American provisions approved by Congress in recent years require that DoD purchase a range of

items (such as large propellers, welded anchor chains, ball bearings, and air circuit breakers) exclusively from US suppliers.³⁰ These provisions have obvious implications for foreign defence firms conducting business in the American market.³¹

In addition to passing these provisions, Congress has also attempted to curb DoD's sole negotiating authority with regard to reciprocal defence procurement MOUs. In the past few years, Congress has tended to perceive these MOUs as instruments to further American economic objectives rather than to fulfil defence operational needs. Accordingly, it has attempted not only to maximize the visibility of economic issues in this context but also to obtain a greater role for itself in the MOU-making process. To the extent that it

³⁰"Allies View Buy-American Debate as Test," *Defense News*, 10-16 June 1996, p. 1.

³¹Recently, Congress reversed its stance on Buy-American restrictions by passing legislation that allows the United States Secretary of Defense to waive certain Buy-American restrictions for international programmes involving countries with which the United States has an MOU on defence cooperation. This legislation, which had taken on major political importance as an indicator to US allies of the American commitment to open its defence market to foreign competitors, was seen as a major victory for US defence contractors and trade organizations which had fought against Buy-American provisions in the 1997 House Senate authorization conference. See "Allies View Buy-American Debate as Test," *Defense News*, 10-16 June 1996, p. 1 and "US Lawmakers Relent on Buy-American Restrictions," *Defense News*, 5-11 August 1996, p. 1.

succeeds, this process will become increasingly politicized as DoD is compelled to consider members' views so as to preclude subsequent legislation that would countermand provisions of the negotiated agreement.³²

While each of these factors and trends can be seen as playing an independent part in reshaping the United States defence industrial environment, it is important to recognize that the end of the Cold War has played a pivotal role in establishing the 'conditions of possibility' for many of the others. Put simply, the end of the Cold War provided the opportunity for the United States to reduce its defence spending, adjust its military planning, and rethink its priorities and interests regarding the defence industrial base. With this in mind, the next part of the chapter will look at a number of policy initiatives adopted by the Clinton Administration since its 1992 election, arguing that these initiatives reflect, first, a change in the focus and objectives of United States defence industrial base planning brought about by the end of the Cold War and, second, a broad effort to improve budgetary, employment, trade, and overall economic performance. It will also contend that these policy

³²James Fergusson and Wendy Weber, "The Changing American Defence Industrial Environment and the Future of the Defence Firm in Canada," in Andrew Latham and Nicholas Hooper, eds., *The Future of the Defence Firm: New Challenges, New Directions*, (Dordrecht: Kluwer, 1995), p. 80.

initiatives should be expected to significantly reshape the United States defence market and defence industrial base over the next few years.³³

United States Defence Industrial Policy Under Clinton

The Clinton Administration entered office in 1993 committed to the advancement of US economic interests. With regard to the defence industrial base, it has supported a strategy based on defence conversion, acquisition reform, and the promotion of DoD's use of dual use products, processes, and technologies,³⁴ in order to ease the impact of reduced defence spending and to help both government and industry adjust to the changing United States defence industrial environment. In contrast to its predecessor, the Clinton Administration has advocated significant government leadership in managing the downsizing and restructuring of the defence industrial base. This has led to the development of a

³³Buxton, *Op. Cit.*, p. 1.

³⁴"Dual use" means having defence and commercial application, whether as a product, process, or technology. *Dual use products* are items used by both military and commercial customers. *Dual use processes* are those that can be used in the manufacture of both defence and commercial products, such as computer-aided design. *Dual use technology* refers to fields of research and development that have potential application to both defence and commercial production. See *Adjusting to the Drawdown, Op. Cit.*, pp. 30-31.

relatively activist industrial policy in which "the legislative and fiscal tools of government are used to improve the business environment in which US firms operate."³⁵ A key part of this policy has been an effort to provide for a more collaborative partnership between the government and the defence industry. While the Clinton Administration's strategy was largely endorsed by the Democrat-controlled Congress, it has faced a certain amount of opposition from the current Republican majority.

Despite this opposition, the 1994 election of a Republican-controlled Congress has not resulted in a fundamental change in the overall direction of United States defence industrial policy as it was proceeding under Clinton. Although the Republican agenda tends to be more defence-friendly than that of the Democrats, there have been overriding fiscal considerations - such as the continuing budget deficit - that have prevented any drastic increases in defence spending.³⁶ Recognizing this, however, it is significant to note that these fiscal considerations have not

³⁵Slack and Skynner, *Op. Cit.*, p. 380. The Bush Administration preferred to take a 'laissez-faire' approach to the downsizing and restructuring of the defence industrial base, arguing that market forces should drive the process. In fact, the very term 'industrial policy' was considered taboo within the Bush Administration.

³⁶Malloy, *Op. Cit.*, p. 7.

prevented Republican lawmakers from attempting to redirect United States defence spending, increasing funding in certain areas and reducing it in others. Most recently, the Republican-controlled Congress came into conflict with the President over its insistence on a \$7 billion increase to Clinton's 1996 defence budget request.³⁷ This increase was directed toward programmes such as the B-2, F-22 fighter, F-15E, F-16C/D, F-18C/D, and Comanche RAH-66. At the same time, Republican lawmakers have sought to remove non-defence items, such as breast cancer research, from the defence budget and to reduce spending in other areas such as entitlement programmes, dual use technologies, and the dismantling of chemical and nuclear weapons in the former Soviet Union.³⁸ Given these recent efforts, it can be expected that the Republicans' second term "may bode well for the defence industry while jeopardizing conversion and social programs."³⁹

In response to the decline in US defence spending and, in particular, to the sharp cuts in procurement, the Clinton

³⁷See "Defeat May Send Defense Bill Back to Conference," *Defense News*, 2-8 October 1995, p. 3 and "Defense Hike May Draw Veto," *Defense News*, 20-26 November 1995, p. 3.

³⁸Confidential Interview, Canadian Government Official, Washington, DC, 12 June 1995. See also "Defeat May Send Defense Bill Back to Conference," *Defense News*, 2-8 October 1995, p. 3.

³⁹Malloy, *Op. Cit.*, p. 1.

Administration has supported a number of interconnected policy initiatives designed to help companies adjust to the changing United States defence industrial environment and, more importantly, to maintain the technological superiority of US forces at an affordable cost. These initiatives have focused primarily on breaking down the barriers between defence and commercial industries and encouraging a higher degree of commercial-military integration in the United States defence sector. Greater integration, it is argued, will "foster the free flow of state-of-the-art technologies between commercial and defence products, thus increasing the capabilities upon which DoD can draw and ultimately resulting in more modern, capable, and cost-effective defence systems."⁴⁰ It will also facilitate the conversion/diversification efforts of defence-dependent companies, enabling them to move more freely between defence and non-defence applications.⁴¹

Before addressing these various policy initiatives, it is important to note that this emerging focus on commercial-military integration has particular significance for the United States defence market and defence industrial base because, in contrast to countries such as Germany, Japan, and

⁴⁰*Adjusting to the Drawdown, Op. Cit.* P. 22.

⁴¹*Ibid.*, p. 23. Conversion/diversification will be discussed in greater detail in the following section on the United States defence industrial base.

Canada where "firms involved in defence production are highly integrated and tend not to be highly dependent on defence R&D and production," the United States has a very low level of commercial-military integration.⁴² This has resulted primarily from DoD-unique specifications, standards, and buying practices that have served to create a division between defence and commercial R&D and production. This division has led to a reluctance on the part of commercial corporations to enter the defence market. In addition, for firms that are involved in both the defence and commercial sectors, it has resulted in the creation of separate divisions with different staff, production and research facilities, and accounting procedures.⁴³ Because of this, efforts to break down the barriers between defence and commercial industries will essentially redefine the United States defence industrial base and, with the inclusion of commercial industries, increase the competition for DoD research and procurement contracts.⁴⁴

A key part of the Clinton Administration's approach to fostering greater commercial-military integration in the defence sector has been an effort to promote DoD's use of dual use products, processes, and technologies. As one of its

⁴²Slack and Skynner, *Op. Cit.*, p. 379.

⁴³*Ibid.*

⁴⁴*Ibid.*

first acts, the Administration dropped the word 'defense' out of the name of the Defense Advanced Research Projects Agency (now ARPA) "to emphasize the agency's new role in promoting dual use technologies."⁴⁵ More recently, the Department of Defense outlined a new dual use technology and production strategy designed to increase DoD's reliance on the commercial sector.⁴⁶ This strategy is based on the recognition that rapid advances in commercial technology, combined with declining US defence spending "have, in many cases, rendered DoD's traditional, defence-unique approach to technology development and procurement less affordable and less effective than in the past."⁴⁷ Accordingly, it attempts to break down the barriers between defence and commercial industries, allowing DoD "to exploit the rapid rate of product development and the market-driven efficiencies of commercial industry to meet military needs."⁴⁸ By drawing on commercial products, processes, and

⁴⁵Buxton, *Op. Cit.*, p. 15. The Advanced Research Projects Agency (ARPA) is the principal DoD agency responsible for conducting long-range, high-risk R&D in advanced technologies contributing to national security needs. In its 35 year history, it has funded many technologies that have met defence needs and enjoyed great commercial success as well.

⁴⁶Department of Defense, *Dual Use Technology: A Defense Strategy for Affordable, Leading-Edge Technology*, (Washington, DC, February 1995).

⁴⁷*Ibid.*, p. 1.

⁴⁸*Ibid.*, p. 3.

technologies wherever possible, DoD will be able to:

- Shorten weapon system development time and increase the pace at which technological improvements are incorporated into new military systems. This goal can be accomplished by introducing the commercial sector's continuous stream of updated technology during development, production, and deployment phases.
- Reduce costs for procuring leading edge technology. Commercial components, technologies and subsystems can, in many cases be incorporated into military systems to meet the functional requirements at lower costs than technology that is uniquely developed from scratch for a specific military customer.
- Maintain its ability to respond rapidly to national security contingencies. Close integration with the private sector is imperative if the nation is to be equipped to gear up its industrial capabilities quickly to meet the military demands of a crisis.⁴⁵

According to this dual use technology and production strategy, DoD will make investments in three main areas. First, it will "pursue a long-term defence R&D investment strategy that aims to ensure that the American commercial technology base remains at the leading edge in critical areas strategic to the US military."⁴⁶ Second, it will "make long-

⁴⁵*Ibid.*, pp. 3-4.

⁴⁶*Ibid.*, p. 6. Currently, DoD's research effort is focused on four main areas: information technology, advanced materials, advanced manufacturing, and advanced simulation and modeling.

and medium-term investments in the deployment of new manufacturing technology to promote the integration of military production with commercial production."⁵¹ Third, "wherever advantageous to US national security, DoD will make investments internally to promote the near- and medium-term adoption of commercial materials, products, components, processes, practices, and technologies in military systems."⁵² These investments, which involve issues such as export controls and restrictions on foreign investments in domestic industries, will require greater coordination with departments such as Commerce, Energy, and State.⁵³

Recognizing that DoD's ability to draw on commercial products, processes, and technologies has been hindered by its increasingly cumbersome and time-consuming acquisition process, the Clinton Administration has identified acquisition reform as a priority and has supported a number of initiatives designed to bring about a simplified commercial-style

⁵¹*Ibid.* A key element in this second area was the highly controversial Technology Reinvestment Project (TRP). The TRP was canceled and, in early-1996, replaced with the Dual Use Applications Program (DUAP). The DUAP will only consider technologies that can be used in the military, unlike the TRP, which also sought to turn over the best DoD-developed technologies to private industry. See "DoD Repackages Dual-Use Goals," *Defense News*, 15-21 April 1996.

⁵²*Ibid.* For a further discussion of these "three pillars" of DoD's dual use technology policy, see pp. 7-29.

⁵³*Ibid.*

procurement system that gives priority to acquiring commercial products, processes, and technologies and, wherever possible, eliminates those unique contracting, technical, and accounting requirements that form a barrier to greater commercial-military integration.⁵⁴ The most significant of these initiatives has been the 1,800 page report of the Acquisition Law Advisory Panel, commonly known as the Section 800 report.⁵⁵ Commissioned in the FY 1991 defence budget legislation and supported by the Clinton Administration under its broader plan for 'reinventing government', this report forms the basis for current United States acquisition reform legislation.⁵⁶

One piece of legislation that is of particular significance is a recent law, based on the Panel's recommendations, which raised the threshold for simplified acquisition procedures from \$25,000 to \$100,000, thus, setting aside all procurement under \$100,000 for American small and disadvantaged businesses.⁵⁷ This legislation has a number of benefits not only for American companies but also for the

⁵⁴*Ibid.*, pp. 3-4.

⁵⁵*Streamlining Defense Acquisition Laws*, Report of the Acquisition Law Advisory Panel, (Washington, DC: Government Printing Office, January 1993).

⁵⁶Buxton, *Op. Cit.*, p. 17.

⁵⁷*Ibid.* The specific legislation was the Federal Acquisition and Streamlining Act of 1994.

United States government. For small businesses, it means that approximately 40,000 new DoD contracts with a value of \$2 billion will be added to the small business reservation programme.⁵⁸ It also means that purchases below \$100,000 will now be exempt from many DoD-unique clauses, making selling to the government both easier and less expensive. For the United States government, this legislation means that the lead-time for contracts between \$25,000 and \$100,000 will be greatly reduced, resulting in lower costs and a substantial reduction in administrative burden.⁵⁹

Within the context of the changing United States defence industrial environment, the Clinton Administration has also supported an effort to transfer much of DoD repair and overhaul work from government depots to private industry. During the Cold War, repair and overhaul work was shared between government depots and private industry with about 70 percent of the workload going to depots.⁶⁰ However, with the end of the Cold War and, in particular, with the reduction in DoD procurement contracts, defence firms have begun to demand

⁵⁸*Statement of Mrs. Colleen Preston, Deputy Under Secretary of Defense, Acquisition Reform* to the Subcommittee on Procurement, Taxation, and Tourism of the House Committee on Small Business, 1 February 1994, p. 8.

⁵⁹*Ibid.*, pp. 9-10.

⁶⁰Buxton, *Op. Cit.*, p. 12.

a larger share of the depot maintenance business. In response to these demands, the Clinton Administration has advocated the transfer of more repair and overhaul work to the private sector. As Slack and Skynner note, "[t]he rationale for this is twofold: first, the transfer of work would allow for a much-needed rationalization of DoD infrastructure that takes into account reduced fiscal resources, and second, such a transfer would provide additional work for the troubled private sector."⁶¹ However, standing in the way of this transfer is a law that requires government depots to receive at least 60 percent of depot maintenance work. This law has been strongly supported by members of Congress who are concerned primarily with protecting government workers in their constituencies. While this debate will undoubtedly continue over the next few years, privatization efforts are, in many cases, already in full swing.⁶² These efforts could result in important new opportunities for both American and Canadian firms.

Another area of United States defence industrial policy that has received increased attention in recent years is trade

⁶¹Slack and Skynner, *Op. Cit.*, p. 383.

⁶²See "White Referees Competing Aims for Privatization," *Defense News*, 30 October-5 November 1995, p. 3 and "Depot Privatization Survives Opposition," *Defense News*, 6-12 May 1996, p. 14.

and international cooperation. With the end of the Cold War and the breakup of the Soviet Union, there is a perception that the "reasons the United States collaborated with its allies in defence technology are not as valid as they once were, and US policies on armaments cooperation, broadly conceived, must be reconsidered."⁶³ Although the Acquisition Law Advisory Panel did not make any specific recommendations on US defence trade policy, it did suggest several principles that should guide the defence trade and cooperative relationships between the United States and its allies. Most importantly, it suggested that DoD acquisition policy should, first, "be consistent and reciprocal with the acquisition and trade policies of its allies" and, second, "be consistent with the promotion of a strong US defence technology, industrial, and mobilization base."⁶⁴ Underpinning these suggestions is a concern for the international competitiveness of American defence firms and a feeling that because the United States has the largest base, it *should* be the largest exporter. As one industrial specialist noted, the United States is seeking *equal*, as opposed to *equitable*, treatment for all defence

⁶³Office of Technology Assessment, *Arming Our Allies: Cooperation and Competition in Defense Technology*, (Washington, DC: Government Printing Office, May 1990), p. 3.

⁶⁴*Streamlining Defense Acquisition Laws*, Op. Cit., p. I-17.

firms.⁶⁵

This focus on reciprocity has already begun to affect defence economic relations between the United States and its Japanese and European allies which, according to one source, have moved from a pattern of cooperation in the mid-1980s to one of increased competition in the early 1990s.⁶⁶ Although to a lesser degree, it has also begun to affect defence economic relations between Canada and the United States. On June 1, 1994, the United States government proposed a new Memorandum of Understanding designed to restructure the Canada-United States defence economic relationship. This MOU, which was sent to Canada for comments, focuses primarily on making the relationship more reciprocal. In particular, it proposes to increase American access to the Canadian defence market and to "limit the adverse effects of offsets, including regional industrial benefits."⁶⁷ This new arrangement, when concluded, could essentially redefine the pattern of Canada-United States defence economic cooperation.

⁶⁵Confidential Interview, United States Government Official, Washington, DC, 13 June 1995.

⁶⁶Edgar and Haglund, *Op. Cit.*, pp. 19-41.

⁶⁷Confidential Interview, United States Government Official, Washington, DC, 13 June 1995.

Offset considerations have, at many times, become matters of contention in the United States.⁶⁸ However, given current changes in the United States defence industrial environment and, in particular, the downsizing and restructuring of the defence industrial base, offsets are likely to receive an unprecedented level of attention in the next few years. The main concern for the United States is the negative effects of offsets on trade - a concern that was recently heightened by a US Commerce Department study that revealed a slow trend toward increased offset requirements. This study showed new US offset obligations in 1993 at \$4.8 billion on sales of \$13.9 billion, and in 1994 at \$2 billion on sales of \$4.8 billion. This represents an increase in the value of offset demands from 35 percent of sales in 1993 to 41.6 percent of sales in 1994.⁶⁹ The Commerce Department study also revealed a trend "away from direct offsets involving trade intimately linked to the particular defence sale, to demands for indirect offsets involving commercial trade or technology transfer."⁷⁰ This second trend was particularly worrisome to William

⁶⁸See Office of Management and Budget, *Report on Offsets in Military Exports*, (Washington, DC: Government Printing Office, 1989).

⁶⁹Bureau of Export Administration, *Offsets in Defence Trade*, May 1996, as cited in "US Offset Initiative Leaves Allies Cold," *Defense News*, 3-9 June 1996, p. 1.

⁷⁰*Ibid.*

Reinsch, Commerce's undersecretary for export administration, who stated that "the growing demand by governments in Asia and the Middle East for technology transfer could result in a long-term structural problem for US industry by creating new overseas competitors."⁷¹

These trends have prompted the United States government to begin an effort to restrict the use of offsets in international arms trade. However, as in the past, this effort has been opposed by the United States' European allies who will not discuss new offset policies without also addressing other sorts of trade barriers, such as Buy-American provisions, more commonly employed by the United States.⁷² For European countries, the issue is not offsets but rather access to markets. As one German Ministry of Defense official has stated, "[e]ven though offsets are an uneconomic way to do business, it is the only way to correct Europe's chronic trade deficit in defence purchases."⁷³ Despite this opposition, however, President Clinton's Trade Promotion

⁷¹*Ibid.*

⁷²"US Offset Initiative Leaves Allies Cold," *Defense News*, 3-9 June 1996, p. 1. It is important to note that any effort by the United States government to unilaterally restrict the use of offsets would also be strongly opposed by American defence firms which would be placed at a serious competitive disadvantage.

⁷³*Ibid.*

Coordinating Committee has begun to debate the offset issue and is expected to recommend "that the United States attempt to launch multilateral negotiations aimed at eliminating, or capping, offset requirements."⁷⁴

Finally, in response to sustained pressure from US industry, which has, since the end of the Cold War, become increasingly dependent on the export market, the Clinton Administration has supported a number of initiatives designed to advance US export sales. These initiatives have focused, *inter alia*, on relaxing US export controls, streamlining government agencies involved in exports, and subsidizing long-term, low-interest loans to US exporters.⁷⁵ While industry representatives have been encouraged by these initiatives, they have made several additional recommendations for reform. For example, a 1995 study by the Aerospace Industries Association's (AIA) Aerospace Research Center urged the Clinton Administration to work with Congress to reform the Export Administration Act (EAA) governing the sale of civil

⁷⁴*Ibid.*

⁷⁵It is significant to note that the Administration's effort to subsidize long-term, low-interest loans to US exporters (through a \$150-million fund at the US Export-Import Bank) stands in sharp contrast to a long standing US policy of opposing this type of practice as an unfair subsidy. Slack and Skynner, *Op. Cit.*, p. 386.

technology that also has military applications.⁷⁶ Specifically, it recommended the further relaxation of export controls and transfer restrictions on dual use technologies, claiming that restrictive US controls have caused American firms to lose major export sales to foreign competitors.⁷⁷ In addition, the AIA study suggested that the United States government provide "better export financing for defence sales to help US companies meet competition from government-supported companies in Europe and elsewhere overseas."⁷⁸ These recommendations from the AIA are underpinned by two main assumptions. The first is that in the post-Cold War era, exports have become critical to the health of US defence and aerospace industries.⁷⁹ The

⁷⁶The AIA's Aerospace Research Center, "After the Cold War: The US Aerospace Industry in the International Marketplace," as cited in "AIA Says US Should Relax Export Controls," *Defense News*, 31 July-6 August 1995, p. 46. The Clinton Administration's first effort to reform the EAA was rejected in 1994 by the Democrat-controlled Congress on the grounds that it restricted the role of DoD in approving export licenses for sensitive technologies. Since then, the issue of EAA reform has been revived by the Republican-led Congress which introduced a new version of the bill in January 1995.

⁷⁷*Ibid.*

⁷⁸*Ibid.*

⁷⁹The importance of exports should not be understated. The AIA study noted that in 1994, exports accounted for 33 percent of US aerospace sales. This can be compared to less than 10 percent in the 1960s. For a detailed analysis of the growing importance of exports for the US aerospace industry see David Buxton, *The US Aerospace Industry*, US Market Information Report No. 9, (Washington, DC: Canadian Embassy, August 1994), esp. pp. 14-16.

second is that government support for these industries is needed in order to ensure their international competitiveness. To the extent that these recommendations are adopted by the US government they will enhance the ability of American firms to compete for export sales.

Although United States defence industrial policy is, in many areas, only beginning to change, the defence industrial base has already been significantly transformed as a result of the decline in US defence spending and, in particular, the sharp cuts in procurement that took place between FY 1985 and FY 1995.⁸⁰ This transformation has had, and will continue to have, important implications for Canadian defence firms and for the Canada-United States defence economic relationship. Accordingly, the next part of the chapter will explore current

⁸⁰Another development that has contributed to this transformation has been the adoption, by American defence firms, of new manufacturing technologies (flexible manufacturing systems), new work processes (team-based production, just-in-time inventory control, zero-defect quality control practices), and new forms of supplier-assembler relations (industrial networks), together referred to as *lean* or *agile* manufacturing. For a detailed discussion of this new production paradigm and its effects on the US defence industrial base see Andrew Latham, "The Structural Transformation of the US Defence Firm: Changes in Manufacturing Technology, Production Process, and Principles of Corporate Organisation," in Andrew Latham and Nicholas Hooper, eds., *The Future of the Defence Firm: New Challenges, New Directions*, (Dordrecht: Kluwer, 1995), pp. 175-192 or Andrew Latham, *From the 'Armoury System' to 'Agile Manufacturing': Industrial Divides in the History of American Arms Production*, (Unpublished Dissertation, York University, November 1996).

changes in the US defence industrial base. More specifically, it will look at the different ways in which firms have responded to the changing United States defence industrial environment, arguing that the overall effect of these responses has been to concentrate arms production among a smaller and smaller group of firms. It will further argue that this concentration has had a particularly negative impact on the United States subcontractor base.

The Changing United States Defence Industrial Base

In general, it can be argued that American defence firms have had two main options when responding to the changing United States defence industrial environment. The first has been to attempt to stabilize or expand their market position through joint ventures, the acquisition of competitors, and increased exports. The second has been to withdraw from the defence industry, either through layoffs and downsizing or through diversification and conversion to commercial production.⁸¹ However, the actual picture has been more complicated than these two options suggest. Firms have varying stakes in the defence market, different levels of

⁸¹Judith Reppy, "Defense Industries in the US and Europe: Shrinking, Not Converting," paper presented at the 1993 Annual Convention of the International Studies Association, Acapulco, Mexico, 26 March 1993, p. 5.

financial reserves, and diverse philosophies of management.⁸² As a result, they have pursued a wide range of adjustment strategies. These strategies have, in many cases, involved elements of both options. Because company size has played a particularly important role in determining the adjustment strategies of individual firms,⁸³ it is useful, for the purposes of this discussion, to distinguish between the types of strategies pursued by prime contractors and small firms or subcontractors.

In response to the changing United States defence industrial environment and, in particular, to the decline in US defence spending, American prime contractors have pursued several different types of adjustment strategies. The most common of these has been downsizing. Over the past few years, prime contractors have reduced capital spending for new plants and equipment, laid off large numbers of employees, and sold or closed numerous plants and divisions.⁸⁴ As a result, they have been able to maintain and, in some cases, actually

⁸²*Ibid.*

⁸³Pages, *Op. Cit.*, p. 3.

⁸⁴A recent *Defense News* survey found that the importance of plant closures has grown as firms have attempted to move beyond laying off employees to more extreme cost-cutting measures. In the 1995 survey, 50 percent of US respondents said that they have been closing plants. This was up from 35 percent in the 1994 survey. See "Companies Streamline to Stay in Global Game," *Defense News*, 31 July-6 August 1995, p. 16.

increase their profits despite declining US defence sales. For example, while McDonnell Douglas Corporation's workforce shrunk by almost one third in 1992 and 1993, its profits rose from \$346 million in 1992 to an estimated \$940 million in 1993.⁸⁵ In fact, according to a 1995 *Defense News* survey, the ten largest US defence prime contractors "are making record operating profits for the past twenty years."⁸⁶ However, because these profits have been due, at least in part, to 1980s contracts which are now winding down, industry analysts predict that the downsizing trend will continue and that there will be a further consolidation of the US defence industrial base over the few years.⁸⁷

A second strategy that has been pursued by US prime contractors is concentration. Simply stated, while most large defence firms have been downsizing as a way of adjusting to the changing United States defence industrial environment, some companies have actually been expanding their operations by pursuing a strategy which has involved nearly total concentration on the defence business.⁸⁸ These companies have

⁸⁵Pages, *Op. Cit.*, p. 4.

⁸⁶"US Supplier Base Feels Bite of Consolidation," *Defense News*, 31 July-6 August 1995, p. 18.

⁸⁷Confidential Interview, United States Government Official, Washington, DC, 13 June 1995.

⁸⁸Pages, *Op. Cit.*, p. 5.

become increasingly aggressive exporters and, in many cases, have either merged with or acquired their competitors in an effort to expand their market share. One example is Loral Corporation which, over the past few years, has purchased the defence divisions of Ford, LTV, IBM, Goodyear, Xerox, and Fairchild Schlumberger.⁸⁹ Other notable examples are Northrop Grumman (the merger of Northrop and Grumman) and Lockheed Martin (the merger of Lockheed and Martin Marietta). In addition to helping companies expand their market share, corporate mergers and acquisitions have enabled them to reduce costs by consolidating their operations, closing facilities, and cutting employees.

Rather than concentrating on the defence business as a way of adjusting to the declining US defence market, some prime contractors have opted to diversify into new defence and commercial areas. However, it is important to note that although diversification and conversion were strongly supported by the Clinton Administration (at least initially), they have for the most part not been well-liked by US prime contractors.⁹⁰ Discouraged by the "difficult legacy of 1970s-

⁸⁹*Ibid.* It is perhaps significant to note that the IBM purchase, by itself, increased the size of Loral Corporation by about one third in annual revenue.

⁹⁰As Eric Pages notes, probably the most-cited quotation about defence conversion has come from Norman Augustine, CEO of Martin Marietta, who joked that "the record of massive

era conversion efforts,"⁹¹ the majority of prime contractors have rejected diversification as a core business strategy. In fact, in the recent *Defense News* survey of leading international defence firms, 59 percent of US companies responded that they have been concentrating on their core business rather than trying to diversify and 43 percent expressed an interest in selling noncore businesses.⁹²

The mix of adjustment strategies pursued by small firms or subcontractors in response to the changing United States defence industrial environment has differed in several important ways from that pursued by prime contractors. First, although downsizing has been the most common strategy for US prime contractors, it has not generally been viewed as a feasible adjustment strategy for US subcontractors. Few subcontractors have the reserves - either in capital or manpower - to enable them to downsize significantly and still maintain a viable company.⁹³ Second, while few prime contractors have embraced diversification as a core business strategy, many subcontractors have made efforts to develop new

defence conversion is one unblemished with success." Pages, *Op. Cit.*, p. 1.

⁹¹*Ibid.*, p. 6.

⁹²"Trend to Consolidate Increases Specialization," *Defense News*, 31 July-6 August 1995, p. 18.

⁹³Pages, *Op. Cit.*, p. 7.

domestic markets. Lacking the structural characteristics that have impeded diversification by prime contractors, many of these subcontractors have been quite successful in entering the commercial marketplace.⁹⁴ Overall then, while US prime contractors have focused primarily on downsizing and concentration, the general trends among US subcontractors can be characterized as consolidation and exit, either through diversification or through going out of business.⁹⁵

With regard to this final point, it is significant to note that US subcontractors have been forced to contend not only with the decline in domestic defence spending that has affected all US firms but also with two additional types of pressures. The first is that the reduction in DoD procurement funding has forced prime contractors "to compete for contracts deemed 'too small' during the Reagan buildup."⁹⁶ The second is that, in their attempt to cut costs and remain competitive, US prime contractors have made an aggressive effort to reduce the number of subcontractors. For example, McDonnell Douglas Corporation's Douglas Aircraft Company cut its suppliers by 75 percent between 1992 and 1993 and Lockheed Martin Corporation's Tactical Aircraft Systems, maker of the

⁹⁴*Ibid.*, p. 8.

⁹⁵*Ibid.*

⁹⁶*Ibid.*, p. 7.

F-16 fighter, cut 68 percent of its suppliers since 1991.⁹⁷ In fact, according to the 1995 *Defense News* survey, 63 percent of US firms have tried to reduce their suppliers in recent years.⁹⁸ This effort to reduce the number of subcontractors represents a significant change from the Cold War practices of US prime contractors. During the Cold War, prime contractors generally relied on large numbers of suppliers.⁹⁹ Today, however, many firms have shifted to an alternative strategy that involves "close cooperation and technology-sharing with a smaller number of high-quality subcontractors."¹⁰⁰ Thus, the US subcontractors that stay in business are likely to be those closely tied to US prime contractors.

The various strategies pursued by American firms and, in particular, by prime contractors, have caused a significant restructuring of the US defence industrial base. Although

⁹⁷"US Supplier Base Feels Bite of Consolidation," *Defense News*, 31 July-6 August 1995, p. 18.

⁹⁸*Ibid.* In contrast, only 38 percent of European companies reported that they have made such an effort. This difference can be attributed, in part, to the close links between prime contractors and subcontractors in many European countries.

⁹⁹This practice was encouraged by DoD as a means of ensuring the existence of a diversified and dispersed supplier base. Confidential Interview, United States Government Official, Washington, DC, 13 June 1995.

¹⁰⁰Pages, *Op. Cit.*, p. 7. In this way, defence industries have become more like commercial industries where primes have typically relied on several close suppliers.

this restructuring was initially quite slow, it has accelerated over the past few years as firms have begun to experience the full impact of defence budget cuts.¹⁰¹ One of the main characteristics of this restructuring has been the concentration of arms production capabilities among a smaller and smaller group of firms. As a number of industry observers have noted, "[t]en years of diminishing budgets, corporate mergers, and improved business practices have distilled the US defence industry into a smaller, more dynamic pool of companies."¹⁰² This concentration has served to reshape the competitive landscape not only of the United States defence market but also of the global defence market more generally.

In its recent survey of leading international defence firms, *Defense News* found that corporate mergers – such as the one involving Lockheed and Martin Marietta – have forced companies to re-examine their business strategies.¹⁰³ As one industry analyst has noted, "[w]ith \$14.4-billion in defence revenues in 1994 and a business base that spans nearly every

¹⁰¹Although defence spending in the United States began to decline in the mid-1980s, the full impact of the cuts was delayed, in part, by the lag time between the budgeting of funds and their expenditure for weapons.

¹⁰²"Firms Emerge Lean, Strong," *Defense News*, 20-26 November 1995, p. 17.

¹⁰³"Giant Firm Reshapes Industry Strategy," *Defense News*, 31 July-6 August 1995, p. 8.

facet of the defence and aerospace business," Lockheed Martin has redefined "the critical mass needed for survival in the defence industry."¹⁰⁴ The strength of the new company comes from its ability to cut overlap in production facilities and personnel and to combine divisions of the two companies in areas such as information services, electronics, and space.¹⁰⁵ In addition, because of its size, Lockheed Martin has presented an "increasingly formidable challenge" to competitors worldwide that cannot match its "potential for cost-cutting based on greater economies of scale, synergies in developing new products, and raw political clout."¹⁰⁶

Although each level, or tier, of the US defence industrial base has been affected by the current restructuring, most evidence suggests that the lower tiers - which consist of subcontractors and suppliers - have borne a disproportionate share of the burden.¹⁰⁷ According to a recent *Defense News* survey, the convergence of myriad pressures on the United States subcontractor base has forced many subcontractors to leave the defence business. In fact, nearly 75 percent of American firms responded that key subcontractors

¹⁰⁴ *Ibid.*

¹⁰⁵ *Ibid.*

¹⁰⁶ *Ibid.*

¹⁰⁷ Pages, *Op. Cit.*, p. 7.

have left the defence business in the past few years.¹⁰⁴ This shrinkage of the US subcontractor base is likely to bring about increasing Congressional involvement in the activities of the US defence industrial base. Despite their small size, subcontractors and suppliers are often critical "because they develop much of the innovative and leading-edge technologies needed for next generation weapons systems."¹⁰⁵

Concluding Remarks

In the period since the end of the Cold War, the United States defence industrial environment has been significantly transformed. The threat of conventional and/or nuclear war with the Soviet Union has virtually disappeared, US military planning has changed, and US force structures and expenditures have been greatly reduced. In addition, American interests, which were previously defined by the dominance of military-security issues, have shifted sharply in the direction of economics. This transformation has generated a number of changes in US defence industrial policies and corporate strategies - changes that could significantly reshape the US defence market and defence industrial base over the next few

¹⁰⁴"US Supplier Base Feels Bite of Consolidation," *Defense News*, 31 July-6 August 1995, p. 18.

¹⁰⁵Edgar and Haglund, *Op. Cit.*, p. 56.

years.

This chapter has explored these changes, highlighting, in particular, ones that are most likely to affect Canadian defence firms and the established pattern of defence economic cooperation between Canada and the United States. With regard to US defence industrial policies, the most significant changes include efforts to reform the acquisition process, increase DoD's use of dual use products, processes and technologies, and advance US export sales. These efforts have been adopted by the Clinton Administration as part of a broad effort to improve efficiency, enforce reciprocity and maintain technological superiority at an affordable cost. With regard to American corporate strategies, the most significant changes are the aggressive efforts of American prime contractors to downsize their operations and to reduce the number of subcontractors. Together, these changes in US defence industrial policies and corporate strategies could have a major impact on both the number and the types of opportunities available to Canadian defence firms in the American market. They could also have important implications for the established pattern of defence economic cooperation between Canada and the United States. An assessment of these potential implications, both for Canadian defence firms and for the Canada-United States defence economic relationship,

will be the task of the following chapter.

Chapter Three

Implications for Canadian Defence Firms and for the Canada-United States Defence Economic Relationship

Introduction

In the period since the end of the Cold War, defence firms in the United States and throughout the Western industrialized countries have been faced with a number of challenges. These include reductions in domestic defence spending, public demands for peace dividends, and increased dependence on the export market. However, for defence firms in Canada, these challenges are not new. Rather, low levels of domestic defence spending, a lack of public support for defence, and the export dependence of Canadian firms have characterized Canada's defence industrial environment for most of the Cold War era.¹ What are new for Canadian defence firms, however, are the changes currently taking place in the US defence market and defence industrial base. These changes will have a major impact on both the number and the types of opportunities available to Canadian defence firms in the American market. They may also have important implications

¹For an historical analysis of Canadian defence expenditures both within the context of overall government spending and in comparison to those of other NATO countries, see R.B. Byers, "Canadian Defence and Defence Procurement: Implications for Economic Policy," in Denis Stairs and Gilbert R. Winham, eds., *Selected Problems in Formulating Foreign Economic Policy*, (Toronto, ON: University of Toronto Press, 1985), pp. 141-152.

for the broad defence economic relationship between Canada and the United States. Given that Canadian defence firms owe their relative success to this relationship, these changes constitute, for them, the most significant challenge of the post-Cold War era.

This chapter will explore the implications of current changes in the United States defence market and defence industrial base for Canadian defence firms and for the Canada-United States defence economic relationship. Because the nature of these implications will be shaped, to a significant extent, by the distinctive characteristics of the Canadian defence industrial base, the first part of the chapter will provide a brief description of these characteristics. Based on this description, it will then identify some of the key strengths and weaknesses of the Canadian defence industrial base, noting, in particular, the ways in which Canada has benefitted from its 'special access' to the American defence market.

The second part of the chapter will consider the implications of current changes, first, in US defence industrial policies and, second, in American corporate strategies both for Canadian defence firms and for the Canada-United States defence economic relationship. Recognizing that a number of these changes have only begun to

be discussed and/or implemented and thus, that there is still a considerable amount of uncertainty regarding their potential effects, it will make two main arguments. The first is that these changes will have a major impact on both the number and the types of opportunities available to Canadian defence firms in the American market. The second is that these changes - and, in particular, the growing tendency of the US government to view defence production and trade in economic as well as in military and political terms - may also have important implications for the established pattern of defence economic relations between Canada and the United States.

Although this chapter will focus primarily on the challenges facing Canadian defence firms as a result of current changes in the US defence market and defence industrial base, it will also highlight the opportunities that have been created by these changes, stressing that even after a decade of cuts, the American market remains a huge and attractive one for Canadian producers. Moreover, it will emphasize that while the pattern of Canada-United States defence economic cooperation may change as a result of emerging American views on defence production and trade, the strong political, economic, and military ties between the two countries should prevent any serious breakdown of the bilateral relationship.

The Canadian Defence Industrial Base

Before describing the distinctive characteristics of the Canadian defence industrial base, it is important to define what exactly a defence industrial base is. Although there are a range of possible definitions, for the purposes of this thesis a defence industrial base can be understood as that part of a country's economy which provides goods and services required to support military activities.² It includes industries such as shipbuilding and aerospace which produce specialized military equipment as well as other industries which produce a vast array of products "without which the specialized military equipment would have little military utility."³

As a result of its unique post-war development - which was characterized, most notably, by closer cooperation with, and integration into, the United States defence industrial base and by "the shift away from domestic production of major weapons platforms towards a concentration on subsystems and

²John Treddenick, "The Economic Significance of the Canadian Defence Industrial Base," in David G. Haglund, ed., *Canada's Defence Industrial Base: The Political Economy of Preparedness and Procurement*, (Kingston, ON: Ronald P. Frye & Company, 1988), p. 26.

³*Ibid.*

components"⁴ - the Canadian defence industrial base, as presently constituted, has a number of distinctive characteristics.⁵ First, it is composed of only a few large firms with sales over \$100 million per year. Or, put differently, the majority of Canadian defence firms are of small and medium size. Second, it is over 50 percent foreign (and especially American) owned, with particularly high levels of foreign ownership among the larger firms.⁶ Third, it is heavily dependent on the export market and, in particular, on the United States Department of Defense (DoD). In fact, DoD buys more goods and services from Canada's defence industries than any other customer.⁷ Fourth, it is highly specialized and

⁴Alistair D. Edgar and David G. Haglund, *The Canadian Defence Industry in the New Global Environment*, (Montreal, PQ: McGill-Queen's University Press, 1995), p. 62.

⁵These characteristics have been outlined consistently in a number of different studies including Byers, *Op. Cit.*, p. 174; David Leyton-Brown, "The Impact of European Market Integration on Canadian-American Defence Industrial Cooperation," *Canadian Defence Quarterly* Vol. 20, No. 4, Special Edition No. 1 (February 1991), p. 33; and Michael Slack and John Skynner, "Defence Production and the Defence Industrial Base," in David B. Dewitt and David Leyton-Brown, eds., *Canada's International Security Policy*, (Scarborough, ON: Prentice Hall Canada Inc., 1995), pp. 366-367.

⁶According to a 1991 article, 54 percent of the Canadian defence industrial base is American owned, while another 10 percent is European (and especially UK) owned. See Leyton-Brown, *Op. Cit.*, p. 33.

⁷Most figures indicate that between 70 and 80 percent of Canadian defence exports go to the United States. See, for example, Byers, *Op. Cit.*, pp. 165-167 or Leyton-Brown, *Op.*

concentrated in the areas of aerospace, electronics, and communications. Fifth, the Canadian defence industrial base does not concentrate solely on defence production "but engages in a significant, and at times predominant proportion of civil business."⁸

Given these various characteristics, it is possible to identify a number of basic strengths and weaknesses of the Canadian defence industrial base. With regard to the former, one of the greatest strengths of the Canadian defence industrial base as it is presently constituted is its selective integration - by virtue of the Defence Production and Defence Development Sharing Arrangements (DD/DPSA) - into the United States defence industrial base.⁹ This integration provides Canadian firms with 'special access' to the US defence market, enabling them to compete with American firms for DoD production contracts as well as for involvement in research and development (R&D) programmes "on the normal commercial basis of price, quality and delivery."¹⁰ Given the relatively small size of Canada's domestic defence market,

Cit., p. 33.

⁸Leyton-Brown, *Op. Cit.*, p. 33.

⁹Martin Shadwick, ed., *The Canadian Defence Industry Guide*, (Toronto, ON: Baxter Publishing, 1992), p. 21.

¹⁰Byers, *Op. Cit.*, p. 181.

this access has obvious benefits for Canadian firms. It also allows the Canadian government to pursue a wide range of economic goals including the advancement of high-technology industries, regional development, and the maintenance of a viable defence industrial base. In fact, a 1983 Canadian government report described the DD/DPSA as "the principal sustaining element in the retention of a domestic defence industrial base."¹¹

In addition to its selective integration into the United States defence industrial base, the Canadian defence industrial base has several other strengths that should be noted. The first is the world-class expertise of Canada's defence industries in areas such as "unmanned air vehicles, regional airliners, gas turbines, flight simulators, major aircraft components, acoustic processors and magnetic anomaly detection systems."¹² The second is "[t]he acquisition of new and expanded skills, a broader and more sophisticated range of products and a modernized physical plant" during the late 1970s and 1980s.¹³ The third is a much lower dependence on defence contracts than the defence industrial bases of many other countries. For example, the Canadian aerospace industry

¹¹Shadwick, *Op. Cit.*, p. 21.

¹²Slack and Skynner, *Op. Cit.*, p. 367.

¹³*Ibid.*

depends on defence sales for only 30 percent of its revenue, compared to more than 60 percent for aerospace industries in Japan, Europe and the United States.¹⁴ This relatively low dependence on defence contracts provides Canadian industries with "a measure of in-built 'conversion' and a partial cushion against reduced domestic and international defence spending in the 1990s."¹⁵

At the same time, however, the Canadian defence industrial base has a number of weaknesses or areas of concern. Among the most serious of these is "the continued erosion of the DD/DPSA through the persistence of non-tariff and other barriers in the United States" which serve to restrict Canadian access to the American defence market.¹⁶ In addition to the US Small Business Set Asides Act, which reserves a certain portion of DoD procurement contracts for bids by American small and disadvantaged businesses, these barriers include numerous congressionally mandated domestic

¹⁴David Hughes, "Canadian Aerospace Industry Prepares for Rising Competition, Falling Defense Sales," *Aviation Week & Space Technology* Vol. 134, No. 11, (18 March 1991), p. 68. It is significant to note that the percentage of sales generated by the defence trade differs significantly between parent sectors. For example, the Canadian shipbuilding industry is much more heavily dependent on defence contracts than the aerospace industry.

¹⁵Shadwick, *Op. Cit.*, p. 22.

¹⁶*Ibid.*

source restrictions that limit the scope of Canadian participation in American defence programmes.¹⁷ Other areas of concern include the perceived absence of a comprehensive and long-term Canadian government strategy for the defence industrial base (and for science and technology more generally),¹⁸ the over-concentration of Canadian defence firms in particular market niches, and "the Canadian government's modest support for defence R&D, which could render the industry's niche markets vulnerable to foreign competition."¹⁹

Implications for Canadian Defence Firms and for the Canada-United States Defence Economic Relationship

Because of the selective integration of Canadian defence industries into the United States defence industrial base, post-Cold War changes in US military and industrial base planning will have a number of implications for Canadian firms. Central among these, is that there will be fewer opportunities for Canadian defence firms to act as second

¹⁷The most notable of these domestic source restrictions are the Berry Amendment which prohibits DoD from procuring food, clothing, fibers, and tools from foreign sources and the Byrnes-Tollefson Amendment which bans foreign construction of any navy vessel.

¹⁸Slack and Skynner, *Op. Cit.*, p. 368.

¹⁹Office of Technology Assessment, *Redesigning Defense: Planning the Transition to the Future US Defense Industrial Base*, (Washington, DC: Government Printing Office, July 1991), p. 107.

source suppliers. Recall that throughout the Cold War era, Canadian defence industries developed and prospered to a significant extent as secondary sources to US-based industries "in support of large peacetime requirements and, ultimately, massive mobilization requirements for a European war."²⁰ With the end of the Cold War, however, "[t]his rationale has collapsed, leaving much of the Canadian industrial base structured for a role that no longer exists."²¹ The United States is not in need of secondary sources of supply and is preoccupied instead with the difficult task of retaining vital industrial and technological capabilities in harsh economic conditions. As a result, it has turned its focus inward in a pronounced way.²² This shift, according to some observers, represents the single greatest challenge to Canadian defence industries in the post-Cold War era.²³

Another serious and perhaps more obvious challenge to Canadian defence industries in the post-Cold War era is the decline in United States procurement funding. This decline - which began in FY 1986 - has already begun to affect the

²⁰Slack and Skynner, *Op. Cit.*, p. 381.

²¹*Ibid.*

²²*Ibid.*

²³*Ibid.* See also David Buxton, *Changes in the US Defence Market*, US Market Information Report No. 3, (Washington, DC: Canadian Embassy, April 1994), pp. 21-22.

opportunities available to Canadian defence firms in the American market. It will likely continue to do so in the future. Of particular concern to Canada are "[t]he cancellation or collapse of new international joint development projects, the reduction of existing procurement programmes and export opportunities, and potential competition from US suppliers in the Canadian market and abroad."²⁴ These consequences of reduced procurement funding will have serious implications for Canadian firms, many of which depend on the American defence market for their survival.

At the same time, however, post-Cold War changes in US military and industrial base planning may create a number of new opportunities for Canadian defence firms in the American market. For example, the new roles and missions being assigned to US forces will require new equipment for peacekeeping, special operations, force projection, training, surveillance, and simulation. These are all areas where Canadian firms have important niche products and capabilities.²⁵ As well, the US government's decision to upgrade existing equipment rather than purchasing new, more

²⁴Edgar and Haglund, *Op. Cit.*, p. 96.

²⁵Buxton, *Changes in the US Defence Market, Op. Cit.*, p. 21.

expensive replacements will generate more work for high technology defence firms in the areas of subsystems and components. This could also open up new opportunities for Canadian defence firms, the majority of which are subsystems/components producers. Finally, although it will not make up entirely for the decline in US procurement funding, the increase in operations and maintenance (O&M) funding, which has resulted from DoD's greater emphasis on readiness, may create new opportunities for Canadian firms involved in maintenance and repair. These opportunities could be even greater if the Administration's effort to transfer repair and overhaul work from government depots to private industry continues.

In terms of specific policy initiatives, the Clinton Administration's effort to promote DoD's use of dual use products, processes, and technologies may also create new opportunities for Canadian defence firms in the American market. As noted in Chapter Two, this effort will involve making medium- and long-term investments to support and develop critical and dual use technologies as well as short-term investments to promote the "adoption of commercial materials, products, components, processes, practices, and

technologies in military systems."²⁶ These investments will generate new opportunities for firms involved in high technology areas and for those involved in "the commercial sector that may be able to service DoD because of a reduction in the use of military specifications."²⁷ Given that Canadian defence firms tend to be high technology niche firms and, moreover, often already engage in a considerable amount of commercial production, they may be well placed to take advantage of these opportunities, providing their access to the American market is not diminished.

With regard to this final point, it is significant to note that in the FY 1993 Defense Authorization Act, the United States Congress defined the US 'national technology and industrial base' to include Canadian firms. This was perceived to be a major breakthrough for Canadian industry because although Canada had been recognized as part of the United States 'domestic defense industrial base' since FY 1989, the term 'national technology and industrial base' encompasses more than just the defence industrial base. Consequently, Canada's inclusion in its definition will enable Canadian firms to participate in many of the new

²⁶Department of Defense, *Dual Use Technology: A Defense Strategy for Affordable, Leading-Edge Technology*, (Washington, DC, February, 1995), p. 6.

²⁷Slack and Skynner, *Op. Cit.*, p. 387.

critical and dual use technology programmes funded or organized by DoD.²⁸

The Clinton Administration's efforts to advance US export sales may also lead to new opportunities for Canadian defence firms not just in the American market but in other foreign markets as well. As subsystems and components suppliers to American prime contractors, Canadian firms participate heavily in the production of US weapons platforms that are exported overseas. For example, Canadian content in US aircraft includes everything from small aircraft parts and components to engines, landing gear, wings, and major fuselage sections.²⁹ Because of this, initiatives designed to enhance the competitiveness of American firms by relaxing US export controls, streamlining government agencies involved in exports, and subsidizing long-term, low-interest loans to US exporters may also benefit Canadian firms.³⁰ However, it is important to note that these benefits will depend on how current changes in the United States defence industrial base affect the role of Canadian firms as subcontractors and

²⁸Confidential Interview, United States Government Official, Washington, DC, 13 June 1995.

²⁹David Buxton, *The US Aerospace Industry*, US Market Information Report No. 9, (Washington, DC: Canadian Embassy, August 1994), p. 17.

³⁰Buxton, *Changes in the US Defence Market*, *Op. Cit.*, p. 20.

suppliers to American primes.

While these changes in US defence industrial policy may create a number of new opportunities for defence firms in the American market, there are other changes taking place that may restrict the ability of Canadian firms to take advantage of these opportunities. Of particular significance are developments in the areas of defence acquisition and trade. With regard to the former, the US government's recent acquisition reform legislation is expected to diminish Canadian access to the American defence market. Simply stated, while the streamlining of defence acquisition laws will reduce both the costs and the problems associated with selling to DoD and, as a result, benefit Canadian as well as American firms, the raising of the simplified acquisition threshold from \$25,000 to \$100,000 does not bode well for Canadian companies. With the elevation of this threshold, a greater proportion of DoD contracts will be set aside for American small and disadvantaged businesses, thereby further restricting the access of foreign (including Canadian) subcontractors and suppliers. Although it is difficult to predict how severe the effects will be, experts generally agree that this legislation will reduce the opportunities

available to Canadian defence firms in the American market.³¹

With regard to the latter, the US government's increasing demands for reciprocity in its defence economic relations may diminish Canadian access in two different ways. First, Canadian access may be limited indirectly by domestic source restrictions aimed at other foreign countries. For example, as relations between the United States and its Japanese and European allies become increasingly competitive, the US government may respond to trade barriers and other perceived unfair trading practices in these countries by restricting certain of its purchases to US domestic sources. Although these restrictions may be directed at the defence firms of other foreign countries, they may be expressed with such generality as to affect Canadian firms as well.³²

Second, Canadian defence firms may be targeted directly by the US government for perceived unfair trading practices. There have always been complaints from both Congress and the defence industry about the lack of reciprocity between Canada

³¹Confidential Interviews, Canadian and American Government Officials, Washington, DC, 12-13 June 1995.

³²Through lobbying efforts which take place at the bureaucratic level, the Canadian government has, at times, been very successful in adding or removing words from legislation or in changing the language of legislation in order to exclude Canadian firms from these types of restrictions. Confidential Interview, Canadian Government Official, Washington, DC, 12 June 1995.

and the United States. A major point of irritation is that when there is a Canadian firm bidding on a Canadian defence contract, Canada will not open its competition to American firms.³³ This practice has, in recent years, prompted Congress to restrict certain DoD purchases to US domestic sources in order to limit the access of Canadian firms. For example, in the FY 1993 Defense Authorization Act, Congress established restrictions which prohibited DoD from procuring foreign sonobuoys unless American firms "are accorded equal access to the market of the bidding firm."³⁴ These restrictions were a direct response to prior Canadian procurement decisions on sonobuoys.

Another, potentially more serious way in which the US government's demands for reciprocity may affect Canadian access to the American defence market is by altering the Canada-United States defence economic relationship. Simply stated, whereas for most of the post-war era, the US government was willing to accept the non-reciprocal nature of the bilateral relationship and, in particular, of the DD/DPSA on the basis of its military-security interests - that is, in order to preserve Canada's commitment and contribution to

³³Confidential Interview, United States Government Official, Washington, DC, 13 June 1995.

³⁴Slack and Skynner, *Op. Cit.*, p. 385.

North American defence - with the end of the Cold War and the breakup of the Soviet Union, this willingness may no longer obtain. In fact, in recent years, as the US government has begun to focus on the economic aspects of its defence economic relationships, there has been a growing sense that its trading partners are 'taking advantage' of it. This sense has led, *inter alia*, to renewed pressures being directed at the DD/DPSA.³⁵

As noted earlier, the US government has already initiated the process of restructuring the Canada-United States defence economic relationship by submitting to Canada for comments, a new defence procurement Memorandum of Understanding (MOU) designed to make the relationship more reciprocal. This new MOU proposes, most notably, to increase American access to the Canadian defence market and to "limit the adverse effects of offsets including regional industrial benefits."³⁶ It also proposes to eliminate the Canadian Commercial Corporation (CCC) which American subcontractors have long argued "gives Canadian firms an unfair competitive advantage in bidding for DoD contracts."³⁷ These proposals, if adopted, would

³⁵Edgar and Haglund, *Op. Cit.*, p. 65.

³⁶Confidential Interview, United States Government Official, Washington, DC, 13 June 1995.

³⁷*Redesigning Defense, Op. Cit.*, p. 110. The CCC was established by the Canadian government to act as a conduit for

essentially redefine the Canada-United States defence economic relationship and, in so doing, threaten the continued viability of the Canadian defence industrial base.

In more specific terms, the US government's proposals would limit the ability of the Canadian government to restrict its purchases to domestic sources only and, perhaps more importantly, to use its defence procurement policies in the pursuit of various non-defence objectives such as regional and industrial development, the advancement of high technology industries, and the maintenance a viable defence industrial base.³⁸ This second limitation would be particularly troublesome for Canada as the requirement of direct and indirect offsets has long been viewed by the Canadian government as "a valuable means of maintaining some domestic defence industrial capabilities and reducing the potential political fallout resulting from the expenditure of large sums of DND money outside of Canada."³⁹ Although this requirement has generally been opposed by the United States - on the grounds that it violates the spirit of the DD/DPSA - it did

contracts between Canadian defence firms and the United States DoD. Through the CCC, the government "undertakes to ensure quality control, certifies price and delivery, and assumes contract liability should a Canadian company fail to fulfill a contract." *Ibid.*, p. 109.

³⁸Edgar and Haglund, *Op. Cit.*, p. xiv.

³⁹*Ibid.*, p. 65.

not become a major issue during the Cold War because of the primacy of American military-security interests. However, with the end of the Cold War and the concomitant shift in American interests, this is likely to change.

Finally, the various adjustment strategies pursued by American firms in response to the changing United States defence industrial environment will also have important implications for Canadian firms and, more broadly, for the Canadian defence industrial base. Although direct trade between Canadian and American companies is difficult to monitor completely, the Canadian Embassy in Washington estimates that roughly 60 to 65 percent of all Canada-United States defence trade is in the form of commercial contracts negotiated directly between American primes or subcontractors and Canadian suppliers.⁴⁰ Other sources suggest that because of the "high level of integration between the two economies at the subtier level, as well as the flow of goods between parent companies and subsidiaries," there is a much higher level of defence trade between Canadian and American firms than these official statistics suggest.⁴¹ Regardless, given the magnitude of this type of trade, it is important to understand how current changes in both the structure and the activities of

⁴⁰*Redesigning Defense, Op. Cit.*, p. 110.

⁴¹*Ibid.*

the United States defence industrial base may affect Canadian access to the American defence market.

Because the majority of Canadian defence firms are subcontractors and suppliers to American primes, they face many of the same pressures as a result of the downsizing and restructuring of the United States defence industrial base as their American counterparts. These pressures include reductions in DoD procurement contracts, increased competition - not only from other subcontractors and suppliers but also from prime contractors themselves⁴² - and the aggressive effort by American primes to reduce the number of subcontractors. However, it is important to note that Canadian defence firms may also face one additional pressure resulting from congressional efforts to ensure the survival of the American subcontractor base. These efforts are likely to result in greater protectionism, most likely in the form of non-tariff and other barriers, implemented piecemeal over time.⁴³

Despite these various challenges facing Canadian defence firms as a result of current changes in the United States

⁴²Eric R. Pages, "The American Business Response to Defense Cutbacks: Strategies for Adjustment and their Effects on International Defense Collaboration," paper presented at the 1994 Annual Convention of the International Studies Association, Washington, DC, 31 March 1994, p. 7.

⁴³Slack and Skynner, *Op. Cit.*, p. 387.

defence market and defence industrial base, it is important to emphasize that even after a decade of cuts, the American market remains a huge and attractive one for Canadian producers. The US procurement budget (at \$43.5 billion in FY 1995) is still substantial by any standard and, moreover, is expected to increase moderately over the next few years. As well, operations and maintenance funding will likely continue to grow as DoD puts greater emphasis on readiness.⁴⁴ It is also important to stress that while the pattern of Canada-United States defence economic cooperation may change as a result of emerging American views on defence production and trade, the strong political, economic, and military ties between the two countries should prevent any serious breakdown of the bilateral relationship.

These ties include their joint participation in NORAD and in the defence of the North American continent which, although it may be less crucial now that the Cold War has ended and the military threats to Western security have been reduced, is still important for both countries. This importance was made clear by the renewal of the NORAD agreement in 1991 and again in 1996. They also include other forms of defence cooperation such as joint exercises,

⁴⁴Buxton, *Changes in the US Defence Market, Op. Cit.*, p. 21.

exchange and liaison officer postings, and weapons testing.⁴⁵

In addition, the ties between the two countries include their various economic agreements, the most notable of which are the Free Trade Agreement (FTA) between Canada and the United States and the North American Free Trade Agreement (NAFTA) between Canada, the United States, and Mexico. These agreements have served to both enhance and secure the historically close economic relationship between Canada and the United States. Finally, these ties also include the long-standing - and generally friendly - political relationship between Ottawa and Washington.

Concluding Remarks

Recognizing that many of the changes in US defence industrial policies and corporate strategies that have been described have only begun to be discussed and/or implemented and thus, that there is still a considerable amount of uncertainty regarding their potential effects, this chapter has made two arguments. The first is that these changes will have a major impact on both the number and the types of opportunities available to Canadian defence firms in the

⁴⁵David Leyton-Brown, "Canadian Defence Policy in the 1990s: The North American Dimension," *Canadian Defence Quarterly* Vol. 21, No. 1, Special Edition No. 2 (August 1991), p. 21.

American market. Generally speaking, this impact will be negative as cuts in DoD procurement funding lead to fewer opportunities and initiatives such as acquisition reform legislation restrict the ability of Canadian firms to take advantage of these opportunities. However, it is important to note that it will not be entirely negative as other initiatives - DoD's increased emphasis on upgrades, for example - create new opportunities for both Canadian and American firms.

The second argument is that these changes - and, in particular, the growing tendency of the US government to view defence production and trade in economic as well as in military and political terms - may also have important implications for the established pattern of defence economic relations between Canada and the United States. More specifically, they may lead to a restructuring of the bilateral relationship in order to make it more reciprocal. However, despite this possible restructuring, the Canada-United States defence economic relationship will continue. One important indication of this was the FY 1993 Defense Authorization Act in which Congress explicitly recognized Canada as part of the US 'national technology and industrial base'.

Conclusion

Although the 1994 *Defence White Paper* acknowledged that with the end of the Cold War and the breakup of the Soviet Union, defence firms in Canada and throughout the Western industrialized countries face a new era of "diminished resources and increased competition,"⁴⁶ it failed to explore the implications of this new era for the future of the Canadian defence industrial base. In particular, the *White Paper* failed to consider the ways in which post-Cold War changes in the United States defence market and defence industrial base may affect the access of Canadian defence firms to the American market. This thesis attempted to respond to this failure by assessing the implications of post-Cold War changes in the United States defence market and defence industrial base for Canadian defence firms and for the established pattern of defence economic relations between Canada and the United States. It began by tracing the evolution of the Canada-United States defence economic relationship from the Ogdensburg Declaration of 1940 to the establishment of the North American Defence Industrial Base Organization in 1987. The second part looked at the period since the end of the Cold War and, more specifically, at the

⁴⁶Department of National Defence, *1994 Defence White Paper*, (Ottawa, ON: Supply and Services Canada), p. 24.

changes in US defence industrial policies and corporate strategies that have taken place during this period. The third and final part of the thesis assessed the implications of these changes, first, for Canadian defence firms and, second, for the Canada-United States defence economic relationship.

Broadly speaking, this thesis made two arguments. The first was that post-Cold War changes in the United States defence market and defence industrial base will have a major impact on both the number and the types of opportunities available to Canadian defence firms in the American market. The second was that these changes – and, in particular, the growing tendency of the US government to view defence production and trade in economic as well as in military and political terms may also have important implications for the established defence economic relations between Canada and the United States. However, this thesis has also contended that despite these implications, the strong political, economic, and military ties between the two countries should prevent any serious breakdown of the bilateral relationship.

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