

**EUROPEAN DEFENSE MARKET INTEGRATION:  
THE AEROSPACE SECTOR IN 1987-1999**

A Thesis

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For my family:

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## ABSTRACT

The dissertation examines to what extent the European Union (EU), industry, and national governments contributed to the consolidation that happened in Europe's defense and aerospace sector between 1987 and 1999. It scrutinizes the power play between key European national governments (France, Germany, and the UK), leading aerospace and defense corporations (DASA, British Aerospace, Aérospatiale, Dassault Aviation, and the Matra-Lagardère group), and the European Commission for liberalizing the defense industrial market, while examining the role that perceptions of "economic security" -- in their technological, military, and competitiveness dimensions -- played in this process.

Although framed by international relations theories and examples, the analysis is a sectoral study in European defense industrial issues that explores the changing patterns of governance in its aerospace sector since the final days of the Cold War. Taking into account the overlapping relationship between the aerospace and defense industries, it investigates which factors and actors were the most influential in this process, and why. It evaluates what political, industrial, economic, and technological circumstances enabled certain actors to bring about the consolidation. Thus, indirectly, it addresses the great question of whether the creation of the European Aeronautic Defense and Space Company (EADS) was EU (national governments and/or the Commission) driven, or if it was the industry that actually spurred the event.

It also assesses whether the corporate sector played a catalytic role in speeding up the dynamics of change and integration in European defense industrial policies. Finally, it concludes by reflecting to what extent Europe had by the end of the 1990s the competitive and defense technological base that might lessen the risk of a fracture in transatlantic relations.

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The restructuring of the European [defense] industry is far from being a simple *pro rata* adjustment of supply to changes in demands arising from objective changes in the security environment. It is inextricably bound up with the development of institutions, policy paradigms (in both the military and the industrial domains), business networks, and relationships between companies and governments.<sup>1</sup> (John Lovering, 1999)

## CHAPTER 1

### INTRODUCTION

The objective of this dissertation is to examine to what extent the European Union (EU), industry, and leading national governments contributed to the consolidation that happened in Europe's defense and aerospace sector between 1987 and 1999.<sup>2</sup> It will scrutinize the power play between key European national governments (France, Germany, and the UK), leading defense and aerospace corporations, and the European Commission for liberalizing the defense industrial market, while examining the role that perceptions of "economic security" -- in their technological, military, and competitiveness dimensions -- played in this process.

Although framed by international relations theories and examples, the analysis is intended to be a sectoral study in European defense industrial issues that explores the changing patterns of governance in its aerospace sector since the end of the Cold War. Taking into account the overlapping relationship between the aerospace and defense industries, it will investigate which factors and actors were the most influential in this process, and why. It will evaluate what political, industrial, economic, and technological circumstances enabled certain actors to bring about the consolidation. Thus, indirectly, it will address the great question of whether the creation of the

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<sup>1</sup> John Lovering, "Which Way to Turn? The European Defense Industry After the Cold War," in Anne Markusen and Sean Costigan, eds., *Arming the Future: A Defense Industry for the 21<sup>st</sup> Century* (New York: Council on Foreign Relations Press, 1999), 342.

<sup>2</sup> For the purposes of this dissertation the author will go along with the tendency of many journalists and politicians and will use "Europe" as shorthand for the European Community/European Union member countries as a whole.

European Aeronautic Defense and Space Company (EADS) was EU (national governments and/or the Commission) driven, or if it was the industry that actually spurred the event.<sup>3</sup>

Furthermore, it will also assess whether the corporate sector played a catalytic role in speeding up the dynamics of change and integration in European defense industrial policies. Finally, it will conclude by reflecting to what extent Europe had by the end of the 1990s the competitive and defense technological base that might lessen the risk of a fracture in transatlantic relations.<sup>4</sup>

The 1987-99 timeframe of analysis is chosen as such because:

a) 1987 represents the year when the Single European Act (SEA) began implementation.

Through its liberalization effects it had a great impact on both those European defense companies that undertake both civilian and military production as well as on EU's high technology policy initiatives; and,

b) 1999 is the year when EADS -- the first truly transnational European defense company -- was created and this event signaled a strong European commitment to defense industrial consolidation.

The project has the following objectives:

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<sup>3</sup> EADS is the acronym for the European Aeronautic Defense and Space Company N.V. The company is *de facto* the result of three moves. First, the German Daimler-Chrysler Aerospace AG (DACA) "took-over" the Spanish firm Construcciones Aeronauticas SA (CASA) on June 12, 1999. Then, DACA merged with Aérospatiale Matra of France on October 14, 1999 creating EADS. Finally, on April 14, 2000, the announced joint venture between EADS with the Italian strategic partner Finmeccanica (i.e., Alenia Aerospazio) led to the final shape of the new European aerospace giant. The EU Commission approved the creation of EADS N.V. (registered in The Netherlands) on May 11, 2000. However, in January 2002 EADS announced that the venture that it had been planning to form with Finmeccanica was not going to go ahead.

<sup>4</sup> The views presented in this dissertation greatly benefited from background conversations with executives from major European defense and aerospace companies; experts in defense-industrial affairs; and, military officers and governmental officials who held positions with relevance to the examined process. They all have spoken candidly on the basis that their comments would be protected by the strict application of the "Chatham House Rule." The rule, defined in 1927 and revised in 1992 by the Royal Institute of International Affairs in London, reads as follows: "When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed." Text (accessed April 15, 2001) from <http://www.riia.org>.

1. By assessing post-Cold War Europe's efforts in achieving the industrial and technological guarantees of sovereignty in international security affairs, it will highlight the increasing significance of defense industrial issues for the post-Cold War transatlantic environment;
2. To examine what role did perceptions of "economic security" play in the process of European defense industrial restructuring (with particular focus on the EU Commission's and aerospace sector's actions and motivations); and,
3. By discussing the interplay between the dynamics of industrial change and the evolution of business-government relations in Europe's defense and aerospace sectors, the dissertation will identify the main characteristics of the new pattern of governance that emerged in Europe's defense industrial affairs in 1987-99.

In this context, the introductory chapter presents considerations with regard to Europe's efforts since the final years of the Cold War in achieving the industrial and technological guarantees of sovereignty in international security affairs and points to an emerging requirement for a new approach to the area of military-technological activity. Finally, it proposes a road map to follow for best scrutinizing Europe's defense aerospace sector integration efforts during the selected timeframe of analysis.



### **1.A Europe's efforts to achieve the industrial and technological guarantees of sovereignty in international security affairs in the context of the increased significance of defense industrial issues for the post-Cold War transatlantic environment**

During the Cold War, the transatlantic alliance and partnership was built on three mutually supporting principles: political and cultural community; common military defense; and, shared burdens and risks. However, one need not be a seasoned expert in order to understand and accept that during the 1990s new patterns of governance emerged in the U.S.-European relationship.<sup>5</sup>

First, there is no longer a clear hierarchy between economic and security issues as during the Cold War, when military and security cooperation between nations in the transatlantic alliance had absolute priority and all trade and economic issues were subsidiary to security. With the collapse of the Soviet Union -- the threat that made military and security cooperation so vital -- and under the process of globalization, evident during the 1990s, this hierarchy has somewhat vanished.<sup>6</sup> Moreover, intensified competition and economic rivalry, especially in high technology sectors, have begun to dominate increasingly the security and political agenda between the U.S. and some of its most important Western European allies.<sup>7</sup>

This trend was particularly evident in the defense industrial field, forcing a German observer to claim in 1997 that "the European defense sector's survival as a leading-edge

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<sup>5</sup> See, among other sources, Joseph Nye, "The US and Europe: continental drift?," *International Affairs* 76, no. 1 (January 2000): 51-59.

<sup>6</sup> Fred Bergsten, "America and Europe: Clash of Titans," *Foreign Affairs* 78, no. 2 (March/April 1999): 20.

<sup>7</sup> See, among other sources, Erik Peterson, "Looming Collision of Capitalisms," *The Washington Quarterly* 17, no. 2 (1994): 65-75.

technology industry capable of acting as a prime contractor for advanced weapons systems may indeed be jeopardized by fierce US technological and commercial competition.”<sup>8</sup>

Second, the 1990s witnessed a constant preoccupation of the European elites with creating a “European defense identity.” A deep commitment to building a “European defense industry”<sup>9</sup> has been perceived as an essential feature of an integrated Europe that must become an independent and coequal partner with the U.S., and the creation of a “truly European” aerospace sector has been considered an essential step in achieving this goal. As Manfred Bischoff, then President and CEO of DASA,<sup>10</sup> pointed out in November 1996 at a symposium of the European Parliament and European Commission in Brussels: “I do think that we can seriously regard the European Aerospace Industry as a vital industrial and technological base and a key element in maintaining an independent European political and economic position.”<sup>11</sup>

In this context, measures that intertwined questions of industrial policy, promotion of new technology, strategic trade, and protection of the defense-industries have been actively advocated at both national and, especially, European levels. Ultimately this was the response to the strategic perception that the decline of the European defense industry was raising broader issues that might

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<sup>8</sup> Jens van Scherpenberg, “Transatlantic competition and European defence industries: a new look at the trade-defence linkage”, *International Affairs* 73, no.1 (January 1997): 100.

<sup>9</sup> “European defense industry” is a useful shorthand expression, which here means mainly Britain, France and Germany. However, the term suggests more homogeneity than the *de facto* reality in 1987-99.

<sup>10</sup> DASA stands for Deutsche Aerospace AG. From 1995, DASA’s parent, Daimler-Benz renamed Deutsche Aerospace AG as Daimler-Benz Aerospace AG whilst retaining the same abbreviation DASA. After the 1998 Daimler-Chrysler merger it became Daimler-Chrysler Aerospace AG (DACA). However, the author employs exclusively the DASA acronym throughout this dissertation.

<sup>11</sup> Manfred Bischoff and Richard Evans, “The Future of the European Aerospace Industry,” speeches held at a Symposium of the European Parliament and the European Commission in Brussels (November 5, 1996). Available in *Dokumente der Luft- und Raumfahrtindustrie*, no. 14/1996 (Munich: Daimler-Benz Aerospace AG, 1996), 5. Bischoff was then also the outgoing President of the European Association of Aerospace Industries (AECMA).

negatively impact European industrial competitiveness and trade performance beyond the defense sector.<sup>12</sup>

Despite the understandable reasons for Europe's determination to build its own defense identity, such a course poses real political and security risks to the transatlantic security and defense relationship. On one hand, it tends to erode the political base on which support of European publics for NATO rests. On the other, it does not do much to stop the defense industrial bases of Europe and the U.S. from growing apart -- a trend increasingly evident since the mid-1990s.<sup>13</sup>

Moreover, as the Kosovo air war demonstrated, the gap between U.S. and European capabilities is real and keeps increasing,<sup>14</sup> leading to an acute and worrisome "tiering" problem within NATO.<sup>15</sup> As Robert Hunter, then U.S. Permanent Representative on the North Atlantic Council, warned already in 1997: "The ability of the European countries to be engaged in high technology is going to be a central part of maintaining the strength of the alliance [and this problem] is a major growth area of concern."<sup>16</sup>

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<sup>12</sup> van Scherpenberg (1997): 100. Traditionally, the EU member states have perceived and approached the defense industrial base more and more as an economic and political issue rather than a matter of security, particularly in the post-Cold War era.

<sup>13</sup> Robert Grant, "Transatlantic Armament Relations Under Strain," *Survival* 39, no. 1 (Spring 1997): 111-37.

<sup>14</sup> For two complementary perspectives (U.S. versus Europe) on the capabilities gap, see David Yost, "The NATO Capabilities Gap and the European Union," *Survival* 42, no. 4 (Winter 2000-01): 97-128; and, Arnau Navarro, *The gap in defense research and technology between Europe and the United States*, report submitted on the behalf of the Technological and Aerospace Committee to the Assembly of the WEU – The Interim European Security and Defense Assembly, Document A/1718 (Paris: WEU Assembly, December 2000).

<sup>15</sup> A gap has been developing during the 1990s within Western states between those who can afford to develop the full range of weapons systems (the U.S.), those "who excel at several" (read France, Italy, Germany, and the UK), and those "who can barely keep up" (i.e., Denmark, Portugal, Spain, and Greece).

<sup>16</sup> Barbara Starr, "USA warns of three-tier NATO technology rift," *Jane's Defence Weekly* (October 1, 1997).

Finally, the creation of BAE Systems<sup>17</sup> and EADS in 1999 signaled a strong European commitment to defense industrial consolidation. It should also be perceived as a wake-up call for U.S. policy-makers because, due to the size of the newly created entities, it heralds stronger European competition in third markets and the possibility of excluding American firms from the European defense market (see Table 1).

But, most importantly, these events trumpeted that the Europeans have begun to fully understand that in the strategic high technology industries, mergers also decide whether a nation, or an integrated bloc of nations like the EU, maintains the industrial and economic guarantees of sovereignty. Sovereignty, especially in the post-industrial world, needs an industrial base, and low levels of technology dependency ensure a higher level of independence in policy-making.<sup>18</sup>

**Table 1. World's top armaments producing firms in 2000<sup>19</sup>**

Rank	Company	Defense sales (U.S. \$ million)
1	Lockheed Martin (U.S.)	18,610
2	Boeing (U.S.)	16,900
3	<b>BAE SYSTEMS (UK)</b>	<b>14,400</b>
4	Raytheon (U.S.)	10,100
5	Northrop Grumman (U.S.)	6,660
6	General Dynamics (U.S.)	6,520
7	<b>EADS (Ge/Fr/Sp)</b>	<b>5,340</b>
8	Thales (Fr) (former Thompson-CSF)	5,160
9	Litton (U.S.)	3,950
10	TRW (U.S.)	3,370

<sup>17</sup> BAE Systems was formed in January 1999 after British Aerospace's (BAe) acquired British General Electric Company's (GEC) defense and electronics units grouped in Marconi Electronic Systems.

<sup>18</sup> While most of the European allies would only with the greatest reluctance enter into conflict with the U.S., issues of industrial domination and strategic sovereignty and survival might well compel them to do so in the future. See, for example, the section on 'Strategic Sovereignty' in William Pfaff, "The coming clash of Europe with America," *World Policy Journal* 15, no. 4 (Winter 1998/99); available via the *Expanded Academic ASAP* database.

<sup>19</sup> Source: SIPRI database (accessed December 20, 2002) from <http://first.sipri.org>. Legend: black – U.S. firm; red -- European defense and aerospace firm; and, blue – European defense and electronics company.

In this setting -- in order to better assess the shifts in the transatlantic defense and security relationship during the 1990s -- a new cross-disciplinary approach is needed. This framework should take into account that the links between military and commercial technology are changing, making the problem of ensuring technological autonomy all the more complicated.<sup>20</sup> Consequently, the meaning of national military capabilities has also to be reassessed and redefined.

Furthermore, since the late 1980s the concept of "dual-use technology"<sup>21</sup> has been increasingly perceived as a window on the contribution of technology to economic and military security. As such, it is providing a new and interesting perspective on the changing relationship between public and private investments in the technology base, and on the nature of the technological process itself.<sup>22</sup> As Keith Hayward contends,

...the relationship between defense industries and governments has been undergoing more fundamental changes brought about by industrial globalization and by longer-term developments in the patterns of military requirements, including the equipment and technologies needed for the RMA [Revolution in Military Affairs].<sup>23</sup>

Against this background, when assessing the post-Cold War transatlantic security environment, greater attention should be paid to the economic, technological, and defense industrial developments in Europe. As such, the new framework of analysis must bridge the fields of international security studies, political economy, and international business relations -- areas of

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<sup>20</sup> Wayne Sandholtz, Michael Borrus, John Zysman, Ken Conca, Jay Stowsky, Steven Vogel, and Steve Weber, *The Highest Stakes: The Economic Foundations of the Next Security System* (Oxford: Oxford University Press, 1992), 193-94.

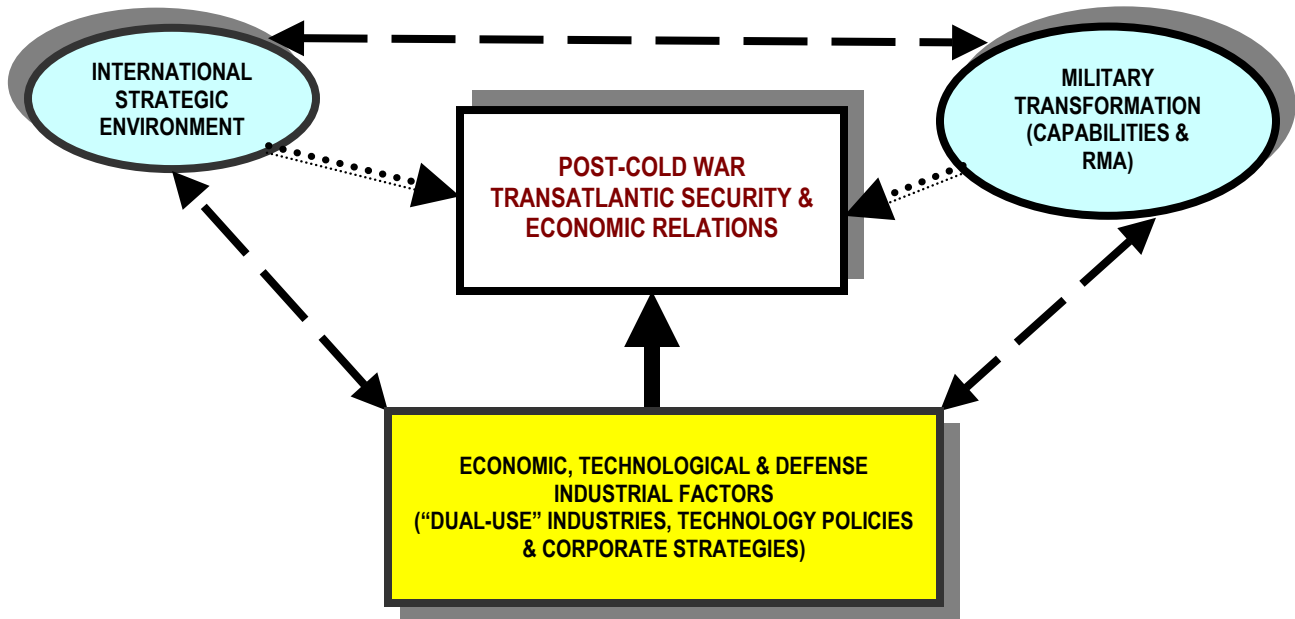
<sup>21</sup> For the purpose of this study a technology is "dual-use" when it has *current or potential* military and civilian applications. The understanding and significance of the term will be discussed in greater detail in Chapter 2.

<sup>22</sup> John Alic, Lewis Branscomb, Harvey Brooks, Ashton Carter, and Gerald Epstein, *Beyond Spinoff: Military and Commercial Technologies in a Changing World* (Boston: Harvard Business School Press, 1992), 26.

<sup>23</sup> Keith Hayward, "The Globalisation of Defense Industries," *Survival* 42, no. 2 (Summer 2000): 115.

research that scholars have kept artificially separated for too long.<sup>24</sup> Its relevance derives from the prospect that it may bring fresh thinking when examining an old question -- the relationship between technology, wealth, and power among the Western allies -- in an international security environment fundamentally different from the Cold War years.

Figure 1. Relevant factors in assessing shifts in transatlantic relations during the 1990s



Ultimately the new approach is required because, as John Zysman observed as long ago as 1991:

A new security era is upon us; but the current security debate is still rooted in the past. The debate has been about the level and form of American contribution to a Western security system in which America is at the centre and its allies have ceded the definition of crisis and response to the United States because they are dependent on its action for their own security. Now a new reality confronts us, in pieces, in fragments and in isolated controversies, but not yet as a whole ... American initiative and Western unity in the Gulf crisis are deceptive; they are not the precursors of the post-Cold War global order.<sup>25</sup>

<sup>24</sup> A plea for approaching the decision-making process in international companies from an interdisciplinary perspective is made by John Dunning in his introductory Chapter "The study of international business a plea for a more interdisciplinary approach," in *The globalization of business - The challenge of the 1990s* (London: Routledge, 1993), 4-36. He suggests that an ideal type of interdisciplinary methodology as one which brings together technology, business strategy, and international relations theory.

<sup>25</sup> John Zysman, "US power, trade and technology," *International Affairs* 67, no. 1 (January 1991): 103.

## 1.B The dissertation's structure

The aim of Chapter 2 is to provide an overview of the current literature with relevance for the purposes of this dissertation. It is meant to be a theoretical map to guide and a framework of analysis in determining which of the private or public (national governments and EU Commission) sector players actually defined and drove the process of European defense aerospace restructuring and consolidation between 1987 and 1999. It is stressed herein that my research methodology is essentially a mix of international security studies, international political economy, and international business concepts. As such, the following themes are being considered:

- The redefined post-Cold War relationship among technology, economic security, and international affairs;
- “Dual-use” technology, strategic industry, and strategic trade policy;
- Structural power theory and international state-firm bargaining;
- Transnational networks and corporate governance; and,
- Approaches toward restructuring and consolidation of the European defense industrial sector in 1987-99.

In Chapter 3 there are three interrelated objectives. The first is to present why and how European perceptions of “economic security” changed in 1987-99. The second is to assess in this context the most important reactions in the defense/aerospace sector (EU Commission, aerospace corporations, and national governments) during the same timeframe of analysis. The final section is devoted to the “dual-use” technologies debate in the UK, France, and Germany as well as at the European Union level.

Chapter 4 suggests a possible correlation between a) France's and Germany's reluctance to fully embrace and pursue the U.S.-led RMA and b) the EU Commission's and European

industrialists' efforts since the late 1980s to challenge America's technological and economic supremacy in the civilian aerospace sector. It concludes that the phenomenon actually could reflect a strategic decision that has been taken on the part of European political-industrial elites.

It presents elements that might well support the fact that such a course of action was the best choice available to European elites in the context of their perception that the high-technology policies promoted in the U.S. since the early 1990s began to alter the patterns of competition in the international system. This development was assessed as having the potential to seriously increase the American influence on Europe's ability to promote its own foreign and commercial policy agenda in the world.

For achieving this objective, the chapter first presents French and German perceptions of the U.S.-led RMA, while being concerned also with the impact of the military-technological revolution on the two countries' responses in the defense and aerospace sectors. Then, it highlights Europe's quest for strategic independence in 1987-99 focusing on *Airbus Industrie* and the early stages (1994-99) of the Galileo project.

Chapter 5 surveys the corporate strategies, financial performance, and relations with the national governments from the late 1980s to the mid-1990s of those aerospace and defense firms that were the key players in the events that led to EADS's creation: DASA (Germany), BAe (UK), and Aérospatiale, Dassault Aviation, and the Matra-Lagardère group (France).

Chapter 6 assesses the events in 1996-99 that led to the failure of the European Aerospace and Defense Company (EADC) project and to the creation of EADS and BAE Systems instead. It has as its main objective to test the hypothesis that, especially after the mid-1990s, the industry was the primary driving force behind the consolidation and rationalization of Europe's aerospace and defense sector. This part of the dissertation first describes the restructuring options available to the top European companies after the 1996 Boeing-McDonnell Douglas merger as



highlighted in the March, 1998, Joint report of Aérospatiale SA, British Aerospace plc, Construcciones Aeronauticas SA, Daimler-Benz Aerospace AG. Then, it presents a detailed and analytical chronology of the developments in 1996-99, with special emphasis on the restructuring in the French aerospace sector. Finally, it provides an analysis of why the EADC project could not become reality (i.e., the failed BAe-DASA merger) and why EADS and BAE Systems were then *de facto* the best outcomes available to Europe's most relevant aerospace and defense companies.

Chapter 7, while reflecting on the newly emerged pattern of governance in Europe's defense and aerospace sector in 1987-99 and its implication for the future of the transatlantic relationship, sets forth the analytical conclusions and suggests a possible future research agenda.