

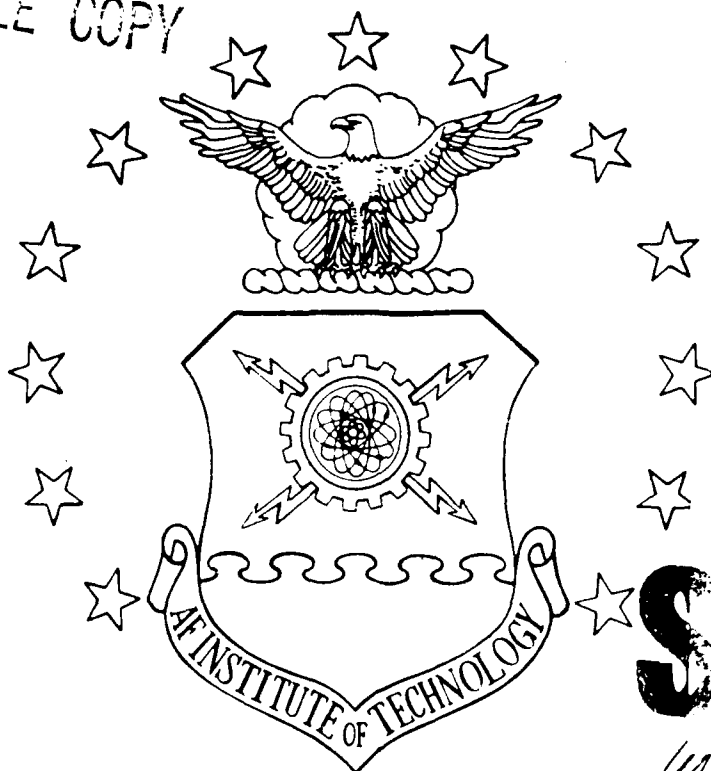
1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete them.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress regularly to ensure that the project is on track.

5. The final step is to evaluate the results of the project. This involves assessing the outcomes against the objectives and goals to determine the effectiveness of the intervention.



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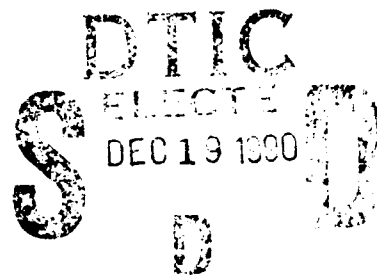
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AN ANALYSIS OF THE EFFECTS OF
EUROPEAN COMMUNITY 1992
ON THE UNITED STATES DOD
ACQUISITION ENVIRONMENT

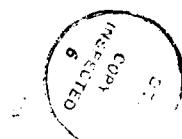
THESIS

HAROLD DAVID HINCKS, Captain, USAF

AFIT/GCM/LSY/90S-6

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AN ANALYSIS OF THE EFFECTS OF
EUROPEAN COMMUNITY 1992
ON THE UNITED STATES DOD
ACQUISITION ENVIRONMENT

THESIS

Presented to the Faculty of the School of Systems and Logistics
Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Master of Science in Contracting Management

HAROLD DAVID HINCKS, B.S.

Captain, USAF

September 1990

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Preface

This study developed a better understanding of the purpose and potential of the European Community 1992 initiative. With the ever-increasing squeeze on the U.S. defense budget, the potential threat of reduced access to the international market in Europe seemed worthy of analysis. While the addition of new primary data is always critical, perhaps to some readers the most important part of this study was the comprehensive literature review. Sometimes a "bringing-together" of previously written ideas is the best "favor" that careful research provides. I hope at least that this study may be used as a springboard for future analysis.

I don't know why it's traditional that spouses be recognized at the end of an acknowledgements listing, so I'll thank my wife, Beverly, first. Thanks, Bev, for knowing when to leave me alone, when to bother me, and when to comfort me during the completion of this study. Special thanks to Lieutenant Colonel C. Michael Farr, who as my thesis advisor shared freely of his knowledge and time in directing this study to a successful close. Thanks to all those who consented to being interviewed for this study. Final thanks to Major General Lewis G. Curtis, Colonel John V. Orsini, Colonel William C. "Bud" Moening, and Colonel Bruce W. Ewing, all whose leadership and guidance got me started off right in the world of acquisition and officership.

Table of Contents

	Page
Preface	ii
List of Figures	v
List of Tables	vi
List of Acronyms	vii
Abstract	ix
I. Introduction and Research Method	1
Chapter Overview	1
General Issue	1
Objective of the Research	2
Methodology	2
Investigative Questions	2
Research Process and Design	3
Limitations of the Research	6
Sequence of Presentation	8
II. Literature Review	9
Chapter Overview	9
Evolution of the European Community	9
Effect on the U.S. Defense Acquisition Environment	18
Creation of a New Market	18
Sensitivity to European Issues	19
German Reunification	24
Barriers Within the Market	26
Notions of Protectionism	32
Summary	37
Influence Upon U.S. Industrial Competitiveness	39
New Technology Development and Transfer	41
Adaptation of Management Philosophies	47
Summary	55
Creation of Business Alliances	56

	Page
Equitable Partnerships	63
Summary	67
Effect of EC-92 on NATO	68
Is Disillusionment a Potential Reality?	68
Military Needs	69
Economic Costs	71
The Controversy Over Burdensharing	72
Evolution of the Alliance	74
Summary	77
Research Model	77
III. Analysis of the Interviews	80
Chapter Overview	80
Improving the U.S. Defense Acquisition Environment.	80
How Things Really Are	81
Modification To Current Procedures	84
Attitudes	88
Industrial Competitiveness	91
Market Factors	95
European Unification Considerations	95
Concerns Over German Reunification	99
Issues Surrounding Technology Transfer	101
Possibilities For NATO	103
Summary	105
IV. Conclusions and Recommendations	106
Chapter Overview	106
Conclusions of the Study	106
A Conceptual Model	113
Suggestions For Further Research	114
Appendix A: Interview Guide	117
Appendix B: Proposed Contractor Survey	119
Bibliography	126
Vita	131

List of Figures

Figure	Page
1. Evolution of the European Community.10
2. EC Population vs US (1986 In Millions)16
3. EC/US Gross Domestic Product (1987 in Billion \$)17
4. Projected Baseline Gains From Barrier Removal and Market Integration39
5. European Community Competitive Factors40
6. Comparison of United States and European Military-Industrial Environment.48
7. Scale of European/American Industrial Strategy60
8. Initial Research Model78
9. Final Integrative Model.	114

List of Tables

Table	Page
1. Gross National Products of Selected Countries, 1950 - 2010 (In billions of 1986 U.S. dollars).	20
2. Annual Military Spending By Selected Countries, 1950 - 2010 (In billions of 1986 U.S. dollars).	21
3. Projected Baseline Gains In European Currency Units (ECU)	38

List of Acronyms

AFIT	Air Force Institute of Technology
AWACS	Airborne Warning and Control System
COCOM	Coordinating Committee (US/Western Europe/Japan)
DOD	Department of Defense (US)
DTIC	Defense Technical Information Center
EC	European Community
EC-92	European Community 1992
ECJ	European Court of Justice
ECU	European Currency Units
EEC	European Economic Community
EFA	European Fighter Aircraft
ESPRIT	European Strategic Programme for Research and Development in Information Technology
EUCLID	European Cooperation for Long Term Initiative for Defense
FAD	Force Activity Designator
FMS	Foreign Military Sales
GDP	Gross Domestic Product
GNP	Gross National Product
IEPG	Independent European Programme Group
JPATS	Joint Primary Aircraft Training System
MOD	Ministry of Defense
MOU	Memorandum of Understanding
NATO	North Atlantic Treaty Organization
PDM	Programmed Depot Maintenance
SEA	Single European Act

UND	Urgency of Need Designator
US	United States (or U.S.)
USAF	United States Air Force
WEU	Western European Union

Abstract

The purpose of this study was to develop a basis for understanding the necessary U.S. preparations for the single, unified market of European Community 1992.

The potential military, political and economic effects of the European Community on the United States defense acquisition environment are not known. This study primarily concentrated on the economic effects of the Community; however, the relationship of political and military factors and their effect on defense acquisition was also investigated. Specific courses of action already taken by both the European and American governments were evaluated. These actions, coupled with the potential for expected future actions by both partners, called for making a prediction of the necessary U.S preparations for the powerful European Community.

A comprehensive approach was taken with the existing literature on European Community 1992 and factors relating to the Community. Based on a model developed from the literature review, primary data obtained from personal interviews was integrated into final research analysis. A second conceptual model incorporated all of the major and some of the lesser research concepts from the entire study. Perhaps this study will serve as a basis for future study where other research methods may be used.

AN ANALYSIS OF THE EFFECTS OF
EUROPEAN COMMUNITY 1992
ON THE UNITED STATES DOD
ACQUISITION ENVIRONMENT

I. Introduction and Research Method

Chapter Overview

This chapter provides the objective of this research study and the primary issues warranting its review. The research methodologies used for collecting information are also identified and explained. The chapter concludes with an overview of the remainder of the study.

General Issue

Among the dynamic changes occurring in Europe, a very significant development is the plan to unify the economies of Western European countries by 31 December 1992. Known as EC-92 (European Community 1992), the 12 Member States of the European Economic Community are pursuing plans to integrate their economies, reduce trade barriers, and develop a "world class" industrial base. Combining the possible results of EC-92 with the rapidly changing governments in Eastern Europe, it is also highly probable that the U.S. defense acquisition environment will be significantly affected.

Objective of the Research

The potential military, political and economic effects of the European Community on the United States defense acquisition environment are not known. This study will primarily concentrate on the economic effects of the European Community. However, as time permits, the synergistic relationship among economic, political and military factors will also be considered. Analysis of the research is needed as a basis for understanding the necessary U.S. preparations for European Community 1992.

Methodology

Specific courses of action already taken by both the European and American governments were evaluated in this study. Such a study called for making some type of prediction primarily resulting from these previous courses of action. As such, this was somewhat of a hybrid study in that it was largely descriptive with an extra prediction step added on (Emory, 1985:9).

Investigative Questions. The general research issue and the objective of the research were broken down into more specific questions for the purpose of gathering data. These specific "investigative questions" were used as a basis for the study and as a guide in the development of the research. The investigative questions utilized in this study are as follows:

1. What are the general conditions and effects of EC-92 on Europe and the United States?
2. What influence will the United States have on the European Community unification process?

3. Does the potential reunification of East and West Germany benefit the EC-92 process or will "protectionist ideals" and fear of a reunified Germany by a few major European Community countries become barriers to the process?
4. Will the U.S. acquisition environment be weakened by the strengthening of the European economy?
5. How will foreign investment and intra-European mergers and company acquisitions affect the European and United States economies?
6. What current barriers to trade between the United States and Europe, as well as those barriers within Europe, need review and revision?
7. If NATO's military role diminishes, should it evolve into some form of a working political or economic alliance?

Research Process and Design. The investigative questions were answered through a combination of a literature search, personal interviews and the development of an integrative model. Principal data in the literature review was obtained from published and unpublished documentation concerning armaments cooperation, technology transfer, codevelopment, management of European international programs, and European economic integration. The majority of this literature was located within Air University records, specifically at the Air Force Institute of Technology (AFIT). Access to the government documentation was primarily through the services of the Defense Technical Information Center (DTIC).

In addition to the exploratory research achieved through the literature review, the contemporary and dynamic nature of the European Community concept warranted seeking out information from persons familiar with this subject. Such persons helped to achieve insight into the relationships

between concepts and ideals found in other research (Emory, 1985:63). Interviews were conducted with U.S. government and military, and European military personnel in order to gain information not available in the published literature. These government and military interviews were administered to DOD, Department of Commerce, Headquarters United States Air Force, Air Force Systems Command, Air Force Logistics Command, United States Navy and United States Army personnel familiar with European business. Military personnel from countries within the European Community were also interviewed. These interviews, where practical, were conducted in person; otherwise, telephone interviews were administered. The results of the interviews included first-hand information on current events and attitudes in the U.S. defense acquisition environment on the pending European Community. Due to the sensitivity of the issues discussed during the interviews, a few interviewees requested the benefit of non-attribution to their ideas. To insure complete confidentiality of these individuals' responses, a listing of interviewees will not appear in this study; however, those individuals who were not opposed to having their views cited will appear within the bibliography at the end of this study.

Finally, as a means to integrate the final analysis of the research, a model has been developed. This model is more than a graphical representation of the research. As Emory states, "The purpose of the model is the representation of relationships between or among concepts; the prerequisite for

any model is a conceptual scheme. . . (Emory, 1985:31)." The model developed in this study incorporates all of the major and some of the lesser concepts of the research. Strauss points out a few "rules of thumb" for constructing such a model or integrative diagram in the following:

1. An integrative diagram helps to give a clearer picture of where you have come from in the research after all that data collecting. . . It puts together into a larger pattern, however provisional, a lot of otherwise scattered materials -- or scattered sense of those materials -- into a sense that this project "has really gone somewhere." It also gives added assurance that, "We really have something here that makes the total study important or at least interesting."

2. An integrative diagram also gives direction to the forward thrust of the research. It does this not only for psychological reasons but also for analytic reasons. Examined carefully, but sometimes even casually, the diagram helps you to see what is lacking in your previous data collecting, coding, and memoing. Just as with the operational diagrams, black boxes will need to be opened up, relationships between them specified, clarified, and supplemented. (Strauss, 1987:185)

The use of the working model as a research method provided the necessary framework for the research. Secondary data obtained from external sources in the literature review was organized within pre-established components of the model. As a result of the literature review, an initial conceptual model was developed. This model is presented at the end of Chapter II, Literature Review. During the research for this study, as primary data emerged from the interviews, the initial model was modified and reconfigured. The final evolution of the model is presented in Chapter IV, Research Findings and Conclusions. (NOTE: Information sources may be classified into primary and secondary types. "Secondary" data, information created by

others for another purpose, was obtained principally from academic and professional journals, leading newspapers, textbooks, business pamphlets, and various government reports. The "primary" data, information collected from original sources for the specific task at hand, was gathered in personal interviews with selected individuals.)

Limitations of the Research

The nature of this study required thorough review of published literature and documentation. The majority of this literature is categorized as the external secondary source type. Emory states that the most important limitation of secondary sources is that the information obtained often does not satisfy the researcher's specific needs. Primarily, such information is often out of date (Emory, 1985:136). Daily changes to the European Community development continue to occur. For example, the reunification of Germany will have a significant effect on the Community; unfortunately, the research for this instant study occurred during one of the most dynamic periods in recent German history. Such developments made the decision as to when to stop the research for this study relatively difficult.

In addition, reliance on secondary data required a determination of the quality of the data, especially to the degree that the data reflected reality. The most confounding factor here is the question of potential bias (Emory, 1985:152). Although care was taken in the analysis of the information to account for bias, the possibility for this

limitation on the final analysis may exist.

Personal interviews generated invaluable primary data. This data provided depth and aspects of information that could not be obtained elsewhere. The potential for bias was often clear during the interviews; however, this bias frequently led the discussion into other related areas of interest not previously anticipated. Also, nonresponse to one or a few of the interview questions may have slightly skewed the resultant analysis of the information. Yet the methods available for qualitatively analyzing information are "rudimentary" as compared to the techniques available with the quantitative analysis of data (Strauss, 1987:1). In this qualitative analysis, mathematical techniques are of minimal use. Strauss states the following:

Counting and quantitative measurement are minimal and these operations may even be rejected on reasonable, well-thought-out grounds. Whether qualitative or quantitative analysis predominates is sometimes a matter of ideology (which can be frozen into tradition), but more often is a matter of rational choice. At any rate, qualitative analyses are more than merely useful: They are often indispensable (Strauss, 1987:3-4).

Since the components of the final model are dependent upon the factors conveyed in the research, the model must be limited by the same reasons as the primary and secondary data. The risk of creating a model in the context used in this instant study is that despite much memoing, coding, and information analysis many connections may be left unspecified or some "black boxes" may be left unopened (Strauss, 1987:213).

Perhaps this instant study will serve as a basis for future study where other research methods may be used. As this

study was integrated and brought to a close, the following Strauss quotation of his British colleague, Paul Atkinson, seemed to characterize the task at hand:

This aspect -- making it all come together -- is one of the most difficult things of all, isn't it? Quite apart from actually achieving it, it is hard to inject the right mix of (a) faith that it can and will be achieved; (b) recognition that it has to be worked at, and isn't based on romantic inspiration; (c) that it isn't like the solution to a puzzle or math problem, but has to be created; (d) that you can't always pack everything into one version, and that any one project could yield several different ways of bringing it together (Strauss, 1987:214).

Sequence or Presentation

Chapter II presents a review of the available literature on the effect of European Community 1992 on the defense industrial market, U.S. industrial competitiveness, potential business alliances, and NATO.

Chapter III presents an analysis of the primary data obtained in the personal interviews in relation to informational trends and ideals developed in the literature review and a recent DOD EC-92 study.

Chapter IV presents the findings, conclusions, and recommendations developed from the research. The amalgamation of data obtained in the research supports a final model depicting the necessary U.S. preparations for the European Community of 1992.

II. Literature Review

Chapter Overview

This chapter provides the background for the study. The combination of information found in a review of the literature and from personal interviews provided support for the issues that were explored. An examination of the evolution of the European Community and its current steady state furnishes a basis for analysis of the potential effects of the Community on the United States DOD acquisition environment. After taking a look at how various new market factors relate to U.S. defense business, specific analysis into the strengthening of U.S industrial competitiveness and the creation of business alliances will be completed. In addition, an examination of the Community's effect on the North Atlantic Treaty Organization (NATO) is accomplished.

Evolution of the European Community

As shown in the Figure 1, the European Community is an event in an evolving process since its inception following World War II. Figure 1 is a slightly modified version of chart number 3 of Vollmer's briefing charts (Vollmer, 1989:3); the modification was completed by the author using Harvard Graphics software. The European Community is a group of 12 countries tied together by three international treaties, the most important being the Treaty of Rome. The Treaty of Rome was originally signed in 1957 by Belgium, France, Italy,

Luxembourg, Netherlands and the Federal Republic of Germany. In 1973, these countries were joined by Denmark, the United Kingdom, and Ireland, in 1981 by Greece and in 1986 by Spain and Portugal. In historical terms, the 1992 project represents a shift from the EC's expansionary phase in the 1970s

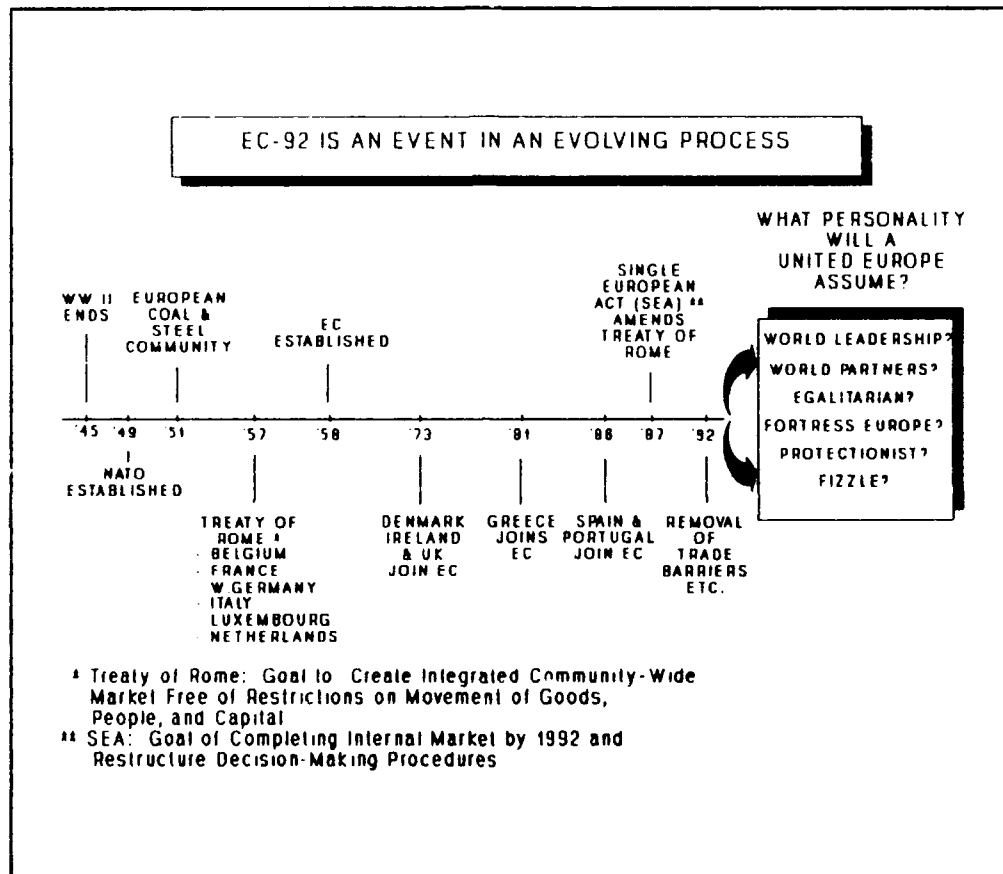


Figure 1. Evolution of the European Community

and early 1980s to a period of consolidation. In addition to the EC preoccupation by the addition of new members, the EC was deeply divided throughout the 1970s and early 1980s by bitter disputes over its budget and agricultural policy. Chronic battles over these issues, especially between Britain and the rest of the community, fueled widespread distrust throughout

the EC (McCartney, 1989:10). Furthermore, the two oil shocks of the 1970s, and the recessions that followed, encouraged individual countries to establish subtle trade barriers as protection for their domestic industries. By the mid-1980s, however, protectionist pressures were subsiding as the world economy recovered. The British cut a deal with the rest of the EC in 1984 on how to divide up many of the Community's bills. The stage was then set to move ahead and focus on making the enlarged EC more efficient.

In January 1985, Jacques Delors, an ambitious Frenchman committed to the ideal of European unity, took over as EC Commission president. Delors considered trying to push for increased cooperation within the EC on defense or monetary affairs, but he concluded that the EC Member States were not yet ready for major progress in those areas. Instead, Delors settled on the idea of seeking to create a single, internal market. He drew up a now-famous white paper outlining the broad goals of what became the 1992 plan; the plan called for adoption of all 279 directives by the Community Council by 31 December 1992. The project's emphasis on making markets more competitive was inspired in part by the deregulation policies of the governments of Britain's Margaret Thatcher and United States President Ronald Reagan (McCartney, 1989:10).

Under Delors' stewardship, the Community maintains four institutions: the Commission, the Council, the Parliament and the Court of Justice. The Commission proposes Community policy and legislation for the Council to discuss and, if appropriate,

adopt. It also executes the daily control of Community policies by ensuring that EC members comply with EC rules and guidelines. The Commission has 17 members nominated by the Community governments, including at least one member from each Member State, but the Commissioners must act in the interests of the Community as a whole. Each Commissioner drafts proposals within his or her area of responsibility such as external relations, competition, energy, or telecommunications. These proposals are discussed by the Commission body as a whole before final disposition (Department, 1989:6-7).

As previously mentioned the proposals from the Commission are arbitrated by the second institution, the Council. As a result of the Single European Act in July 1987, the voting rules of the Treaty of Rome were amended to allow each Member State a set number of votes based on relative population (Zakheim, 1988:66). As the decision-making body of the Community, the Council considers most major market measures, subject to majority voting. However, for politically sensitive items relating to taxation, the free movement of people, and workers' rights; unanimous agreement in the Council is needed. Council meetings are chaired by the Member State holding the Presidency. This position rotates, in alphabetical order, every six months around the Member States. The United Kingdom will hold the presidency the last six months of 1992 (Department, 1989:7). This may prove significant to U.S. industry as final policy changes and plans of action are incorporated into the EC machine. The United Kingdom

vigorously opposes the plan to place tariffs on the bulk of U.S. defense parts and subcomponents. In addition, Britain leads the opposition to a protected defense/high-tech market because they believe it is not in Europe's best interest (Hitchens, 1989b:14).

Under the Community treaties the third institution, the European Parliament, renders formal opinion on many proposals before they are eligible for adoption by the Council. Composed of 518 directly elected members, the Parliament gives a first opinion when the Commission makes a proposal, and then furnishes a second opinion after the Council makes a decision (Department, 1989:8). Revzin states that the European Parliament, lawmakers like bedouins in pinstripes, is somewhat similar to how the U.S. House of Representatives would be if it were on wheels and if most of its decisions could be safely ignored. Additionally, he states that it may actually be the most complicated parliament in the world (Revzin, 1989:R6).

The fourth Community institution is the European Court of Justice (ECJ). The ECJ makes decisions on the application and interpretation of laws which effect the Community as a whole. Comprised of one judge from each Member State, these 13 judges decisions are binding on each Member State and have precedence over national law (Department, 1989:8).

Given the framework of the European Community governing institutions, it must also be recognized that each West European country has a government organization responsible for ensuring the oversight and competitiveness of its defense

industry. The task at hand for the European Community is to get the Member States to accept the government formed by the Parliament, the Council and the Commission as just that, a harmonious and effective government. Member States have developed a habit of dismissing Council directives; Italy has ignored more than 100 decisions of the European Court of Justice, and Greece has contested almost every EC joint political initiative, just to show two examples (Revzin, 1989b:R6). However, the optimists believe that the drive to get ready for 1992 has not only the EC government working well together, but the Member States also melding into the plan.

McCartney provides a brief synopsis of the effect of the European Community on the industry in each of the affected countries in the following list:

Great Britain (Pop 56.8 million, GDP \$662.6 billion) Planned scrapping of border controls may make it harder to keep terrorists and other criminals out of the country.

Ireland (Pop 3.5 million, GDP \$29.1 billion) One of the poorer EC members. To receive substantial economic adjustment aid under the 1992 plan. Already gets large sums for training young workers.

Denmark (Pop 5.1 million, GDP \$101.4 billion) Pulled in two directions, toward fellow Scandinavians outside the EC and toward the continent and the Community.

Netherlands (Pop 14.7 million, GDP \$214.6 billion) Expect to benefit greatly because of a strong presence in trucking and shipping, industries where costs should drop when customs controls are dismantled.

Belgium (Pop 9.9 million, GDP \$138.5 billion) As hosts of Western Europe's "capital" in Brussels, Belgians tend to benefit when the community prospers.

Luxembourg (Pop .4 million, GDP \$6.2 billion) Tiny grand duchy, EC's smallest member, hopes that liberalization of banking rules will help it thrive as a financial center.

West Germany (Pop 60.1 million, GDP \$1,118.8 billion) Efficient manufacturers. Highly regulated insurance industry here fears British and other competition.

France (Pop 55.6 million, GDP \$879.9 billion) Paris is most enthusiastic about Western Europeans integration.

Portugal (Pop 10.2 million, GDP \$26.1 billion) Combination of fresh competition and EC adjustment aid will give its economy a needed injection of dynamism.

Spain (Pop 38.7 million, GDP \$288 billion) Expects to get a major influx of northern European manufacturing companies, banks and other firms that will take advantage of relatively low wages and under-exploited markets.

Italy (Pop 57.3 million, GDP 751.5 billion) High-powered entrepreneurs see great opportunity to move north after 1992. Others fear added competition will hurt Italy, already saddled with a staggering budget deficit and cumbersome bureaucracy.

Greece (Pop 10.0 million, GDP \$47.0 billion) A backward administrative structure and less-developed economy are expected to make it difficult for Greeks to adjust to the post-1992 world.
(McCartney, 1989:10)

The above population figures are as of 1986, and the Gross Domestic Product figures are as of 1987. The relationship of these figures compared to the United States population of 241.6 million people and a Gross Domestic Product of \$4,435.8 billion (McCartney, 1989:10) is best represented in graphical form. Figure 2 shows EC vs US population totals together with the figures from the individual EC countries. Figure 3 shows the same split, but with the Gross Domestic Product data. The

charts in Figures 2 and 3 were generated from the above data reported by McCartney.

Figures 2 and 3 demonstrate that there is no doubt that a united Europe will be able to contribute a great share to global economic stability and progress. George Contogeorgis, during an international colloquium about the Community, felt that the following comments from President Harry Truman's memoirs were relevant:

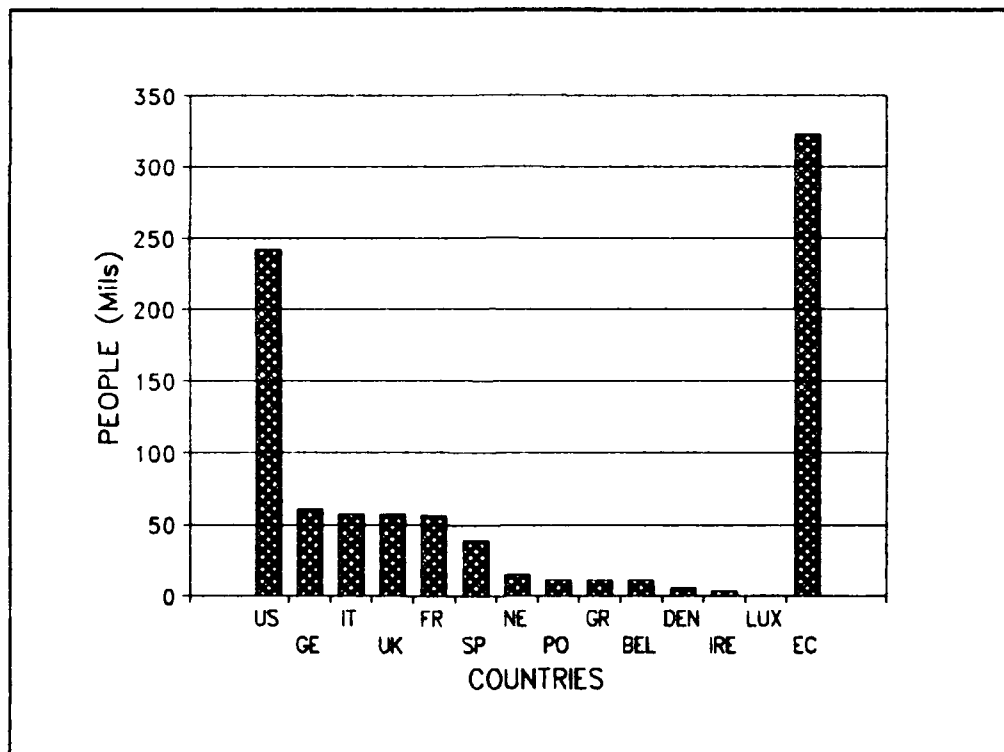


Figure 2. EC Population vs US (1986 in Millions)

What Marshall perceived, in plans which the State Department Staff laid before him, was the importance of the economic unity of Europe. If the nations of Europe could be induced to develop their own solution to Europe's economic problems, viewed as a whole and tackled cooperatively rather than as separate national problems, United States aid would be more effective and the strength of a recovered Europe, would be better sustained. This

was precisely the approach I had in mind. Marshall and I were in perfect agreement. (Contogeorgis, 1989:85)

The European Community has embarked on a marvelous effort to promote the achievements of its economic and political union. Undoubtedly, the United States favors this development just as much today as it did in the past. The Pentagon and the State Department are creating formidable arguments against a "Fortress Europe" to enhance the unification process, yet protect American interests (Silverberg, 1989:47). Further discussion on the concept of Fortress Europe appears later in

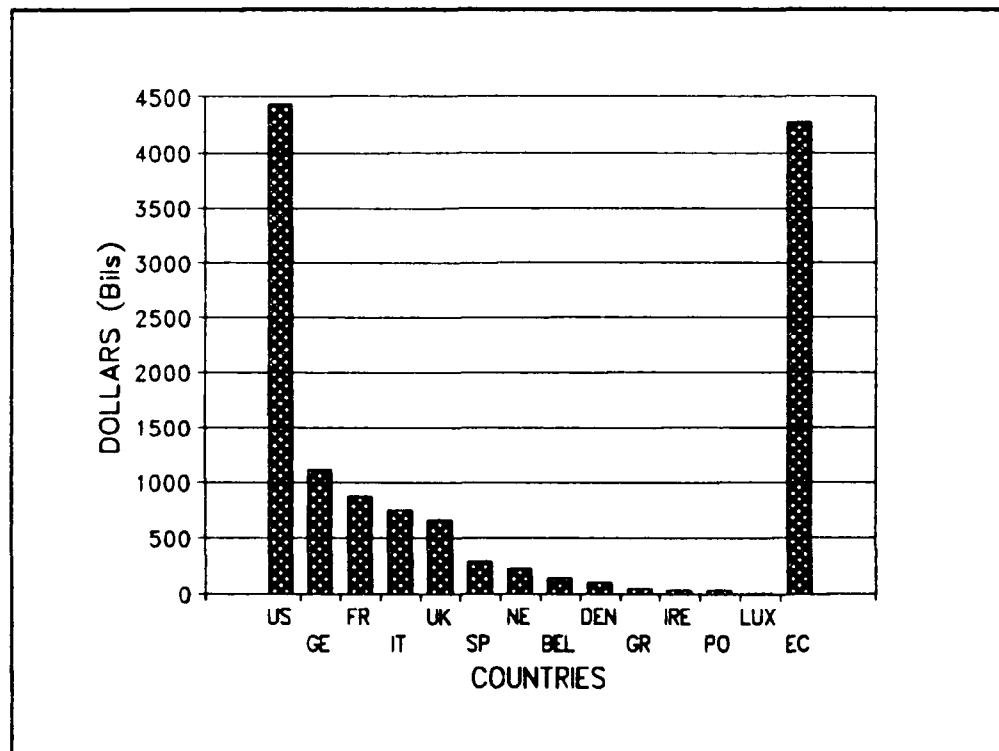


Figure 3. EC/US Gross Domestic Product
(1987 in Billions \$)

this paper. The reasons for U.S. pleasure over this unification are the same as before. The Community and the United States

share common principles and ideals, most of which are centered around securing world peace and maximum economic growth (Contogeorgis, 1989:86). To achieve these goals, the collaboration of a strong united Europe with one voice and a strong America is indispensable. The development of a framework between the European Community and the United States should guide efforts to shape economic, political, and military policy in a rapidly changing world.

Effect on the U.S. Defense Acquisition Environment

Western Europe is changing. The impetus for destruction of ideological divisions and political/economic borders is increasing. The fusion of the European countries is forcing the business community in the United States and the rest of the world to stand up and take notice. The failure of any industrial country to set aside preparations for the developing Community will be considered a gross error in judgement.

Creation of a New Market. The business community is trying to determine how EC-92 will affect them. Fears are growing in countries outside Europe that they will be facing strong barriers which will effect the defense arena. Some experts such as retired Admiral Sir Raymond Lygo, chief executive of British Aerospace, consider the idea of a "Fortress Europe" totally infeasible given the intensity of current international trade. However, a recent U.S. NATO staff study indicated that defense and aerospace would be the hardest hit sectors in the U.S. economy (Sullivan, 1990a:17). If a company sees it as the coming of "Fortress Europe", the goal

may be to get in before the wall goes up. The need to worry about being excluded from EC business is evident when projections are that the European Community will become the largest market in the world with 325 million consumers accounting for approximately 38 percent of the world's commerce (Cohen, 1989:3). The European Community, once established, will possess the capability of a Gross National Product (GNP) of \$3.4 trillion, relatively equivalent to the Gross National Product of the United States. As depicted in Table 1, the relative significance of various GNPs may infer extraordinary changes in the way European economic power is perceived. This information, coupled with the annual military expenditure data shown in Table 2, must at the very least be worthy of a second look by defense industries. Given the figures presented in the tables and recognizing that only three of the European Community countries are represented, these countries' combined GNP is more than half that of the United States. Combined military spending also compares significantly, especially if one considers that a relatively large portion of the U.S. defense dollar goes for protection of the Western European countries. EC-92 should force a decrease in the need for much of this U.S. defense expenditure.

Sensitivity to European Issues. The effect of the European Community, both economically and politically, may be extraordinary. Michael Ely, the Deputy Chief of Mission of the United States Mission to the European Communities, stated the following:

My ambassador had the habit of saying that the US-Japanese relationship was the most important relationship in the world, bar none. I think I have come to the deep conviction that if the US-Community relationship is not the most important bilateral relationship in the world, it is certainly the most important bilateral economic relationship in the world, bar none. (Ely, 1989:77)

TABLE 1

GROSS NATIONAL PRODUCTS OF SELECTED COUNTRIES, 1950 - 2010
(In billions of 1986 U.S. dollars)

Nation	1950	1960	1970	1980	1990	2000	2010
United States	1378	1907	2767	3649	4682	6072	7859
Soviet Union	492	855	1411	1935	2088	2455	2873
Japan	189	336	936	1476	2127	2856	3714
China	114	232	417	793	1520	2395	3791
West Germany	172	402	622	815	1009	1244	3525
United Kingdom	251	349	463	560	670	807	949
France	172	282	486	695	843	1109	1410
India	152	202	294	408	598	897	1330
South Korea	18	27	67	147	274	455	709
Taiwan	5	11	25	57	103	180	317
Brazil	34	65	117	272	353	571	939
Argentina	38	51	78	106	107	119	133
Turkey	32	59	104	171	256	367	501
Mexico	58	104	203	378	444	548	679
Egypt	16	31	49	98	132	158	190

Note: All figures converted from local currencies using purchasing-power parities of 1980. Figures for China, South Korea and Turkey are Gross Domestic Product. Japanese 1950 figure is GNP estimate for 1953.

(Wolf, 1989:4)

In this regard, a distinction may frequently be made between American attitudes toward European Community institutions and toward the Member States themselves. Generally, a Commission issue which the Americans feel comfortable with may be rather unpalatable when consideration is given to the United States having bilateral relationships with certain EC countries. The United States must become more sensitive to the local interests and issues of the Member States. At the very least,

receptiveness to individual country cultures will be a great advantage. Take for instance the following enlightening example:

Instrumentation Laboratory Inc. of Lexington, Mass., tried to appeal to national tastes by designing something for everyone in its blood-clotting analyzer. The basic machine is "functional, simple and rugged -- for the Germans," says Boston designer Gianfranco Zaccari. But certain features, like the arm that picks up the blood sample, is "toylike, friendly and fun -- for the French and Italians. (Pierson, 1990:B1)

TABLE 2
ANNUAL MILITARY SPENDING
BY SELECTED COUNTRIES,
1950 - 2010
(In billions of 1986 U.S. dollars)

Nation	1950	1960	1970	1980	1990	2000	2010
United States	69	168	209	196	288	365	462
Soviet Union	91	95	170	247	299	351	411
Japan	4	4	7	14	22	29	37
China	8	16	37	45	53	120	218
West Germany	0	20	21	27	32	40	49
United Kingdom	23	29	26	29	35	42	50
France	11	22	21	28	34	45	57
India	2	4	9	12	24	36	53
South Korea	1	1	1	5	9	15	23
Taiwan	1	1	2	3	6	11	19
Brazil	1	1	3	1	3	4	7
Argentina	1	1	2	3	3	3	3
Turkey	2	3	5	8	12	17	23
Mexico	0	1	1	2	2	3	3
Egypt	1	2	9	7	9	11	13

(Wolf, 1989:17)

Perhaps it is useful to recognize that during the course of even the most straightforward international program, the national interests of a country and the projected need for the program will be in conflict. Farr states that such conflict could be avoided by "careful harmonization of requirements and

goals at the outset of the program (Farr, 1989:148)." As an example of how sensitivity towards unique European issues pays welcome dividends, Farr referred to the following:

On the F-16 program, the US structured a concept referred to as "ECPs for Commonality". Under this concept, the non-recurring costs of engineering changes were waived if the Europeans did not need the change to meet their operational requirements. This concept allowed the program to avoid multiple configurations of the aircraft, but obviously required compromise and commitment to the project on both sides of the agreement. The Europeans accepted the recurring costs of changes they did not always perceive a real need for. (Farr, 1989:150)

The success of the F-16 program comes at a time when U.S. industry needs to follow good examples and keep the lucrative doors open to the European economy. It is important to realize that European defense industry is not subject to the jurisdiction of the EC Commission; Article 223 of the 1957 Treaty of Rome leaves the responsibility of security with the individual national governments. While this exclusion has been slightly modified by the Single European Act, many firms (some state owned) that produce only defense related equipment will not be directly affected by EC-92. Most likely, the post-1992 European business environment will, to some degree, affect the whole defense products industry. A primary U.S. concern is that EC-92 will reduce the West European market for sales of U.S. defense products (Cohen, 1989:2).

As the marketing strategies for companies within the Community are devised, many West European companies are positioning themselves for a more open and competitive market. Companies have launched a wave of takeovers, similar to the one begun several years ago in the United States, to make sure they

have an adequate presence throughout the EC. West German banks have bought smaller banks in Spain and other EC nations. British companies have taken over many firms across the English Channel. After the waters calm, some critics say that the resulting lifestyle is likely to be similar to that of the United States. In other words, an acceleration of the "Americanization" of Western Europe is fast underway (McCartney, 1989:9). Another critical view of the European Community process centers on the notion that the Community is actually refueling the areas that it intended to eradicate. With this view, Roberts states the following:

In place of the Common Market, there is emphasis on political unification and the expansion of social regulations designed to protect the vested interests that 1992 was supposed to abolish. [But the British] contribution towards free trade counts for little in Brussels, which now emphasizes "social harmonization" as a necessary step to equalize competitive conditions among the Common Market countries. Social harmonization means requiring countries with lower labor costs, such as Portugal, Spain, and Greece, to adopt the expensive social-welfare policies of Germany, France, and the Netherlands. Otherwise, European socialists argue that countries with the lowest social benefits will have a comparative advantage once trade barriers are removed. (Roberts, 1990:26)

Individual Member States are very aware of the potential for exploitation of their economic and technological strongholds by other Member States. Even the popularity of a unified Europe with free unobstructed trade may not open all of the locked doors. A country in the throes of such protection is West Germany. The potential unification of West Germany and East Germany, though not necessary to European integration, will

have dramatic effects on the European Community. A brief look at German reunification is necessary.

German Reunification. At first glance, the results of German reunification would be nothing but positive.

Protzman states the following:

An economically united Germany today would have 77.8 million inhabitants and a gross national product of \$1.1 trillion. It would be a leading exporter and the most powerful economic force in Europe. More important perhaps, the combination of that strength and geography make it the keystone for economic integration of all of Europe. (Protzman, 1989:1)

British Prime Minister Margaret Thatcher has placed German unification at the end of a process of Eastern Europe democratization that would keep the East German state as a separate sovereign entity for a period of 10 to 15 years. Thatcher stated the following:

[German unification] must come at a rate which takes account of other obligations and which gives us time to work things out, otherwise that could destabilize everything. (Keatley, 1990:A10)

She added that European leaders such as West German Chancellor Helmut Kohl and Foreign Minister Hans-Dietrich Genscher should put the longer view of Europe's needs before the more narrow, German nationalistic goals. Thatcher's primary concern is that German unity would possibly upset the European Community economic balance, in which West Germany is already the dominant member (Keatley, 1990:A10). French President Francois Mitterrand agrees with Mrs. Thatcher's views, and added that German unification should "take the form of a special position of the German Democratic Republic within the European Community (Kissinger, 1990:B7)." In the following similar view:

Though President Mitterrand says he does not fear German reunification, France doesn't want it. Reunification complicates Paris's priority of moving ahead quickly with Western European economic integration. A new fatherland of 80 million Germans would tip the balance in the European Community even further in West Germany's direction. Britain shares French concerns about an enlarged Germany becoming the economic superpower in Europe. Prime Minister Thatcher's warning against talking prematurely about reunification springs from the traditional British desire to maintain a balance of power on the continent by resisting the emergence of any outsized rival. For now, however, neither Europeans, Russians, Americans, nor indeed German leaders themselves are ready or eager to see a Fourth Reich. (One Germany, 1989:22)

The American view on German reunification has been a little more complex. The four principles put forward by President Bush and Secretary of State Baker seek to promote current German ambitions while also setting aside historic European fears. These principles are as follows:

That the principle of self-determination be preserved without prejudice to its outcome.

That German unification take place within the framework of NATO and the European Community.

That unification be part of a step-by-step process.

That Germany reiterate its support for the principles of the Helsinki Act regarding its borders.
(Kissinger, 1990:B7)

The inherent danger here is the view that European unification cannot happen without German reunification. In reality, making one a prerequisite for the other may cause problems for both. The time frame for one should not be the timeframe for the other. Kissinger's view is that German reunification is driven by "fundamental emotions fueled by established democratic procedures," as compared to European unification which

"reflects prudent calculations driven by technical bureaucratic procedures." He further warns against "prerequisite unification thinking" in the following:

In truth, the choice of the Western democracies is not so great as their public pronouncements suggest. For any attempt to make progress toward German unification conditional on progress toward European integration will defeat both -- this is the weakness of the American principles. It will sooner or later turn German nationalism against European integration and Atlantic unity. And it will probably prove counterproductive with respect to European integration by giving those who fear German unity and are not enthusiastic about European integration the opportunity to kill two birds with one stone. (Kissinger, 1990:B7)

Barriers Within the Market. For the most part, in the defense acquisition environment, European countries cooperate with one another to the fullest extent possible. They take full advantage of one another's technological and manufacturing capabilities, but only when it makes sense. West Germany, in particular, eliminates many of the downstream obstacles in weapons acquisition by taking the time up front to look at numerous alternatives, evaluate them in an objective environment and then commit to a preferred one (McAleer, 1989:51). McAleer further clarified the German approach to competition:

Whether it is because of nationalized industry or a minimal number of contractors, competition is held subservient to other concerns -- stability of the work force, keeping cost proposals from being tainted by the demands of competition, and others. (McAleer, 1989:52)

However, as shown in the following, the British attitude towards competition further exemplifies the need for U.S. sensitivity towards various European management philosophies:

In Britain, there has been a move to end the cozy relationship with industry that previously existed and to

adopt a new, competitive attitude. The new approach is more commercially oriented, and stresses competition, particularly at the subcontractor level. The British approach also emphasizes fixed-price contracting with payments only against achieved milestones, greater risks but higher rewards for industry, and increased attention to international arms competitions and exportability of British weapons and equipment. (House Report, 1989:650)

The same House Report stated that the French, as well as the British, budget on an annual basis, but their principal defense focus is on long-term planning -- five years ahead with the French and three to ten years ahead with the British (House Report, 1989:650). European parliaments are not disinterested or uninvolved in the major resource decisions associated with national security, but rather the parliaments focus on such long-range fiscal plans. Gansler states, "The intent of this is to make the defense ministries live within the "top lines" of these long-term budgets, but to leave the distribution of the dollars up to the defense ministries (Gansler, 1989:301).

In West Germany, many of the downstream obstacles in weapons acquisition are eliminated through using basic foresight planning. The West Germans take the time to look at numerous alternatives, evaluate them in an objective environment and then commit to a preferred alternative. Competition is held subservient to other concerns such as stability of the work force and the continued protection of the nationalized industries (McAleer, 1989:51). However, within the apparent smooth flow of European business, the seeds for new market barriers may find a place to grow.

The creation of a unified European market may produce external trade and tariff barriers to U.S. firms similar to the Buy American Act provisions, which excluded European firms before the implementation of the GATT and bilateral MOUs (Marvel, 1989:15). However, such changes in the trade and production patterns within the Common Market may be good indications that the European Community economic structure is actually integrating. Walter states the following:

The reallocation of production from high-cost to low-cost community producers changes the geographical locus of production and at the same time increased the volume of intra-EEC trade. Similarly, the broadened range of consumer or user choice which results from integration likewise increased the volume of intra-area trade; whether this consumption effect also tends to result in a shift in the geographical locus of production, however, is not clear. At the same time, community tariff discrimination with respect to non-member countries would be expected to stimulate the volume of internal trade at the expense of trade with the rest of the world. (Walter, 1967:2)

Protective tariffs, as well as quotas, may be set at levels which provide the necessary shielding from foreign competition. For most commodities, national tariffs prevent the international distribution of production to the most efficient suppliers. This adversely effects world welfare, but not necessarily national welfare (Walter, 1967:20). Tariffs can normally be divided into two categories: those used in protecting domestic suppliers from foreign competition, and those used specifically for the purpose of raising fiscal revenues. Most imports subject to revenue tariffs are not significant to intra-community trade. One notable exception is the Benelux revenue tariff on automobiles. While this specific tariff will be eliminated in line with the EC-92 internal

tariff reduction program, it does pose a problem for the Benelux countries by requiring a reallocation of the sources of government revenues (Walter, 1967:50-52).

Coupled with new technologies and improved methods of transportation, reduced barriers to trade can improve production, simplify logistics, and cut costs. Reduced barriers to information flow and the physical movement of goods will actually reinforce the effects of reduced regulatory barriers (Magee, 1989:80-81). Magee gives the following example:

The battle over truck transportation is not over, but introduction of the so-called single administrative document has already simplified paperwork at border crossings and so drastically cut the time, and thus the cost, of moving products between countries. The European Commission is also committed to a Community-wide integrated telecommunications network. Better telecommunications will help make it possible to operate a network of production and distribution facilities as a single logistical system. It will also certainly have an effect on location decisions. (Magee, 1989:81)

Often however, regulatory barriers are not very easy to sidestep. Although the European Community has made some progress in harmonizing general standards, in many cases it appears willing to let Member States keep their specific rules (Toman, 1989:R10). Joseph De Deo, President of Young & Rubicam Europe, was quoted as follows:

As the political and economic boundaries fall, a lot of the social and cultural ones will get reinforced. Just the way Americans tend to remember their ancestry because they're afraid of becoming too homogenized, there might be a nostalgic strengthening of national ties. (Toman, 1989:R10)

In a Defense Systems Management College research report, Farr addresses the influence of other barriers such as

geographical separation, cultural differences, language barriers, differences in national technological capabilities and resources, and different managerial philosophies. He found that cultural and language barriers, and geographical separation were enfeebled reasons for poor international program performance. However, he went on to say that national technological capabilities and managerial philosophies were particularly important, especially between U.S. and European partners (Farr, 1989:167-168).

More specific issues and barriers to harmonious cooperation between the United States and Europe exist. U.S. sensitivity towards these issues is important since each day brings more decisions from the European Community that will make winners or losers out of U.S. companies competing in Europe. Realization of this led American officials such as Commerce Secretary Robert Mosbacher to ask for a "U.S. seat at the table" in Brussels. European officials are not granting one, mainly because they do not have a seat in Congress (Revzin, 1989a:A1).

Another issue is the U.S. strategy for selling in a foreign market. When the United States goes to sell in a foreign market, it has to be prepared to tailor its product to that foreign market, not only in attractiveness, but also in long and short run competitiveness. According to Farr, this is one of the most frustrating issues encountered by the Europeans in cooperating with the United States. Farr identified five areas that our allies reported as posing primary issues and

barriers to effective international cooperation: 1) an unpredictable and undue influence of the U.S. legal community (characterized as a "wild card" influence on program decision making), 2) burdensome U.S. contracting procedures, 3) technology transfer restrictions, 4) protectionism, and 5) a general lack of knowledge and experience related to international issues on the part of U.S. team members (Farr, 1989:67-71). All of these issues will be touched upon in a following section of this study.

Perhaps the reasons for persistent U.S.-EC conflicts is one of differing perceptions. This will of course lead to differing conclusions as to how they may be resolved. Susan Strange wrote the following:

The domesticist interpretation sees the solution as primarily national, both for the United States and for the Europeans as a close association of states still too deeply divided to act effectively as one. To put it briefly and crudely: is the problem how to achieve policy coordination by the governments of the leading industrialized countries? Or is it how to ensure better leadership in policymaking by the United States and better and more concerted and constructive opposition by the Europeans and Japanese? It is possible of course that the solution is both international and national. (Strange, 1988:118)

However, a national solution doesn't necessarily have to exclude the benefits of an international solution. In order to spark meaningful discussions, each player should consider the "other side" to his or her perception of a situation. An increased understanding of the partner's issues will increase positive dialogue and reap the rewards of a "win-win" environment.

Notions of Protectionism. One of the main objectives of European Community and United States commercial policies is to maintain and strengthen global free trade. Coupled with this is the need to resist the growth of protectionist tendencies which flare up from time to time. Protectionist measures often occur despite the market experience that protectionism does not solve problems, but in fact exacerbates them in the long run. Given that the EC and the U.S. are the leading partners in their respective international trade, it is only natural that their bilateral relations from time to time cause friction (Contogeorgis, 1988:86). Farr states that protectionist measures on the part of the U.S. Congress are often identified as a barrier to effective international cooperation. He wrote the following:

Examples [of protectionism] were cited of legislation introduced by Congressmen Barry, Dixon, Ocar, and others limiting US procurement of certain defense-related articles to US sources. These articles ranged all the way from specialty metals, clothing and certain fibers, and anchor chains to a proposal that no defense items ever be purchased from overseas.

Other examples of this protectionist mentality also exist. As a result of legislation endorsed by certain Congressmen, US troops stationed in Germany burn US coal as a source of heat during the winter. This practice not only causes environmental concerns, but also imposes a significant cost penalty compared to locally available alternatives. Certain US naval vessels stationed abroad are required to return to the US for repairs and routine maintenance at a considerable waste of time and dollar resources. (Farr, 1989:70-71)

During the Reagan presidency, the U.S. began or increased protection against a range of imports including steel, automobiles, sugar, semiconductors, lumber and machine tools. Occasionally the U.S. cabinet officers would take note of the

Reagan administration's "clandestine romance with protectionism" (Truell, 1989:R27). Treasury Secretary James A. Baker said that President Reagan granted more import relief to U.S. industry than any of his recent predecessors. On the other hand, Robert Hormats of Goldman Sachs & Company's international unit stated, "I don't think there was ever a president where the gap between the rhetoric and the reality on trade was greater than with Mr Reagan." This gap makes U.S. attacks on foreign trade barriers look rather hypocritical to Europeans. This may help to explain why President Bush is scrambling to restore U.S. free trade credentials by cutting back on steel quotas and stressing his desire to open up the markets with expanded trade (Truell, 1989:R27).

In the European sector there are similar frictions resulting from protectionist measures. The promotion of Europe-wide standards in electronics that would favor European companies over their American competitors is a very real example. Possible robust support for intra-European mergers could freeze the U.S. out of Europe's defense-critical telecommunications industry. There has also been consideration of an EC imposed uniform tariff on defense goods; this could cause significant market damage to U.S. manufacturers of defense components (Zakheim, 1988:68). Recognizing that the fervor of sanctions the Community imposed on agricultural products could dictate the intensity of similar actions in other areas such as defense, Dov Zakheim, former Deputy Under Secretary of Defense, stated the following:

If the Commission staff approaches its regulation of fiber optics, lasers, mobile telecommunications equipment, and the like in the same spirit that it has regulated milk and butter, American industry, however well ensconced in Europe, could be in for a severe jolt. At stake is nothing less than the preservation of both American defense industrial competitiveness within the boundaries of Europe and America's ability to compete with European firms for third country markets worldwide. (Zakheim, 1988:66)

The threat of such protectionist measures would work well enough if all of the Member States were in absolute accord. In reality, they are not. A few of the Northern countries such as Britain, Germany and Holland want a unified Europe with maximum freedom to market forces; these countries fear that jobs may flee to the subsidized, low wage Southern countries. The Southern countries, including Italy, Spain and Greece, favor additional government assistance to industry and more social and trade protection (Revzin, 1989b:R5). To this end the Europeans have formed the Independent European Program Group (IEPG) specifically for the coordination of European defense procurement policies and practices. A cooperative research program spawned from the IEPG, called EUCLID (European Cooperation for Long term Initiative for Defense), has as its goal the retention of European high-tech industries and the promotion of intra-European cooperation. American industry should take notice; U.S. and Canadian defense companies, by definition, are excluded (Cohen, 1989:5). While the statements from various IEPG or European Community officials refer to the pursuit of an open defense market, the assurance to U.S. defense industry may in reality not be very appealing.

The U.S. and other offshore manufacturers may be crowded out of the defense market by subtle European protectionist actions. As European competitors grow stronger and seek more company acquisitions and strategic alliances, U.S. exporters may find their EC distributors consolidating or going into feverish competition with one another. The U.S. exporter will probably not find Europe to be the same unified market that is available to a European-based competitor (Magee, 1989:63). When there is enough domestic volume, a comfortable level of competition is maintained. For example, in Germany, there are two companies designated as military computer companies. All research and development and production are done by these companies, and that is clearly recognized. The two companies are in continuous competition and thus have the necessary incentive for pushing new technology to achieve higher quality and lower cost. Even in countries where the domestic market for a particular product is too small to support multiple sources, the single supplier is still extremely cost-sensitive because of the need to be price-competitive on the export market (Gansler, 1989:302).

Trade relations between the EC and the U.S. are not and probably will not be strained to the level where a confrontation between them is inevitable. There is actually a huge volume of trade being conducted between the two partners without any problem at all. Contogeorgis stated that the percentage of trade exchanges between the European Community and the United States which have suffered from protectionist

measures has been less than 2 percent of the total trade involved (Contogeorgis, 1988:88). Possibly the accusations that the Community is heading toward a very protectionist market, mainly toward the United States, are completely unjustified. The high competitiveness of the European Community may be a very positive element in strengthening the world system of free trade. Contogeorgis offers the following optimistic view:

The United States and the European Community must admit that the size and structure of their economies, the volume of their bilateral trade and the rapid developments in world affairs might create problems and frictions in their relations. But it would be a mistake to magnify them. The important element in the relations of the two partners is not the appearance, from time to time, of some minor problems. The important element is the existence of the political will to tackle the real problems with mutual understanding of the other's position and try to find acceptable solutions, within reasonable time. The United States and the European Community have to work together effectively to transform their problems into opportunities for closer cooperation and for strengthening the existing strong ties between them, for their mutual benefit and for the benefit of the world economy as well. Because of their political influence they can play a key role and they must shoulder the responsibility to join their strengths in a major effort that would contribute to the strengthening of the world free trade system and would best advance and readapt the structure of the world economy to new conditions. (Contogeorgis, 1988:89)

It may not be possible to conclusively prove that the American market is the most open in the world, but many world economists contend that it probably is. The U.S. market works well and the Europeans know it. Ely states that a market just like that of the U.S. is exactly where the Europeans would like to be as a result of EC-92 (Ely, 1988:82). The U.S. and the EC in some ways determine each other; this intertwining means that one could not really talk about what Europe would be without

the United States. This stabilizing development between the two partners is not only healthy, but actually quite successful from an economic and a geopolitical standpoint (Ely, 1988:82).

Summary. In summary, the creation of a new European market will impose a considerable force to be reckoned with by the U.S. defense acquisition environment. Knowing what to expect and how to plan for EC-92 is a paramount concern for many U.S. defense businesses. As the U.S. becomes more sensitive to local European issues effecting Community development, the current barriers to free trade will at least be better understood. Table 3 shows one perspective on significant baseline gains of European Community measures to remove barriers and intensify free trade. The same data is graphically represented in Figure 4. The removal of trade barriers is important to the projected gains; however, the major benefits will come from the removal of production barriers and successful market integration.

Fortunately there is a mechanism in place, though unwritten but in existence, for keeping the U.S. informed about the EC. The EC ambassadors call regularly on the Secretary of State in Washington. As the EC Presidency changes, the Secretary has a meal with these ambassadors. The U.S. sometimes provides papers or comments to the current EC President for use as he or she pleases; if the paper is used at a formal council meeting a briefing is provided to the U.S. representative currently in country. In no way does the U.S. representative have a mandate to speak for the Community, and

TABLE 3
PROJECTED BASELINE GAINS
IN EUROPEAN CURRENCY UNITS (ECU)

<u>STEPS</u>	<u>BILLIONS ECU</u>	<u>% GDP</u>
Removal of barriers affecting trade	8-9	0.2-0.3
Removal of barriers affecting overall production	57-71	2.0-2.4
Sub-total from removing barriers:	65-80	2.2-2.7
Exploiting economies of scale	61	2.1
Intensified competition reducing business inefficiencies and monopoly profits	46	1.6
Sub-total from market integration	62-107	2.1-3.7
<u>TOTAL</u>		
- for 7 Member States at 1985 prices	127-187	4.3-6.4
- for 12 Member States at 1988 prices	174-258	4.3-6.4
- mid-point of above	216	5.3

NOTES: The seven Member States (Germany, France, Italy, United Kingdom, Belgium, Netherlands, Luxembourg) account for 88% of the GDP of the EC 12. Extrapolation of the results in terms of the same share of GDP for the seven and 12 Member States is not likely to overestimate the total for the 12.

(Kirk, 1989:13)

such indirect U.S. participation is predicated upon the attitude of the Member State currently holding the presidency (Ely, 1988:79). Undoubtedly the U.S. inputs will improve in some modest way the European Community process. Just as important, the information flow mechanism currently in action should assure that there will be few surprises to the interests of the United States.

While European Community officials insist that they are not building a protectionist bastion, they do admit that EC-92

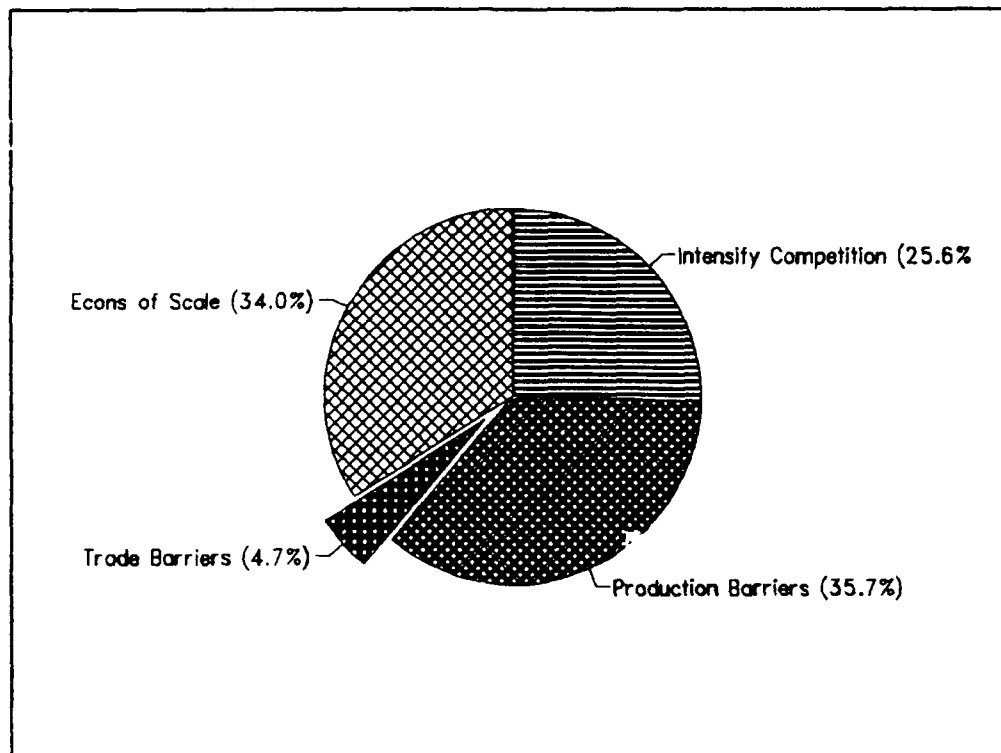


Figure 4. Projected Baseline Gains From Barrier Removal and Market Integration

is linked to multilateral trade discussions in Geneva. As Revzin wrote, future access to a united Europe could be used as a "lever to pry open markets they [EC officials] deem closed to Europeans (Revzin, 1989a:A14)." The Europeans may use their own protectionist-destroying plans in a "horse-trading" effort to increase their current market share outside the Community.

Influence Upon U.S. Industrial Competitiveness

The Independent European Program Group (IEPG), a non-NATO, non-European Community organization established by several governments in Western Europe, has as its purpose to intensify cooperation and efficiency among European defense manufacturers. A goal may be the unfolding of a European

defense industry that could effectively curtail U.S. defense sales to the European Community (Gold, 1989:43).

The factors listed in Figure 5 represent a few of the concerns that U.S. industry must face. Figure 5 is a slightly modified version of chart number 18 of Vollmer's briefing charts (Vollmer, 1989:18); the modification was completed by the author using Harvard Graphics software. The new marketing and investment strategies that U.S. companies will require are examined in the remainder of this literature review.

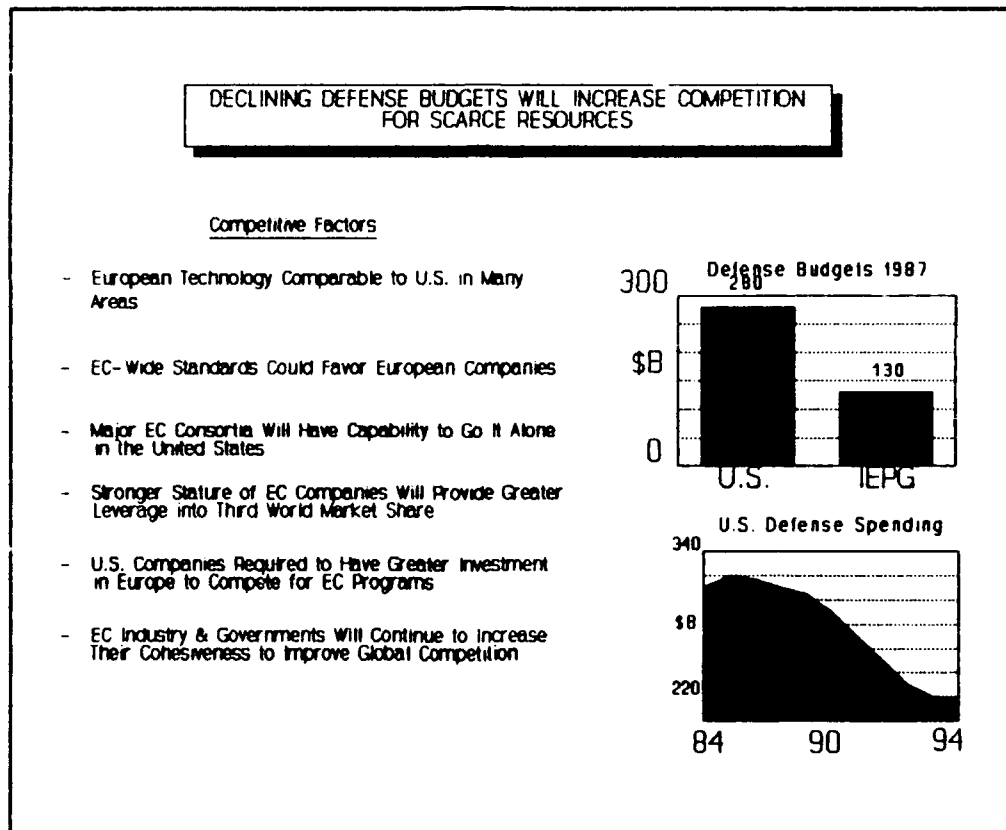


Figure 5. European Community Competitive Factors

As the European Community ministers begin to more closely influence foreign policy matters, it makes sense for U.S. companies to establish a firm European presence now. European policy and trade practices may test the U.S. industrial competitiveness as it has never been tested before.

New Technology Development and Transfer. There is a crucial interaction between technical change and the evolution of industry, particularly defense-related industry. Dependence on technical change requires that companies undertake certain strategies to secure their own survival. Todd and Simpson state that technology "bridges the environment and the industrial organization (Todd and Simpson, 1986:143)." The feedback that exists between industry and technological development often shape the production activity of the individual firm. As Todd and Simpson wrote in the following, the format of the firm has some bearing on the acceptance of technology:

A large firm well-endowed with resources will be more susceptible to promoting R & D and then adopting the resultant innovations than would a small firm strapped for resources. On the other hand, the economic attributes of the firm - the fact that it is specialized or diversified, an independent operation or subsidiary operation - also greatly influence the attitudes to technology. Diversified firms, for instance, may be in a position to take risks with innovations that would not be contemplated by specialized firms: the former can divert resources from other arms of the organization to cover the losses that may ensue; that is, they can pursue a strategy of cross-subsidization unavailable to the latter. (Todd and Simpson, 1986:143-144)

Basically, the attitude that industry exhibits towards technology is dependent upon the historical and environmental conditions within which the industry operates. U.S. defense

industry must realize that their European partners are gearing up to reap the benefits of new technology that the Community will provide. The danger, as Cohen states, is that "technologists will gravitate to where the action is" (Cohen, 1989:10). Unfortunately with current trends, this will be outside of the United States. The Europeans are serious about narrowing some of the technological gaps that currently exist between Europe and the United States. They are also poised to compete in areas where the U.S. was once, or may still be, dominant (Aubin, 1988:58).

Technology transfer is a mechanism used by some industrial organizations to overcome the problems associated with innovating new aircraft or production technology (Todd and Simpson, 1986:161); the issues surrounding technology transfer are major problems that have to be dealt with. While U.S.-European collaboration will continue, there clearly is a nationalistic desire among Europeans to produce European weapon systems. An important policy issue which must be addressed is the types of technology which can be transferred to U.S. allies, and the controls on its use and distribution. Constant vigilance is necessary to keep technology out of the wrong hands. On this point, Kirk states the following:

If the European arms industry is to be truly integrated, as a result of 1992 and/or IEPG recommendations, there must be a free flow of critical technology across intra-European borders to the plants of production. In addition, trans-Atlantic arms cooperation as discussed earlier also implies a steady two-way flow of critical technology. While these sales and transfers may make sense militarily, there is a further dimension to consider -- that of the survivability of the American industrial base. But the world's military race has, many have argued,

been supplanted by an economic one, where our closest allies are now our fiercest economic rivals. America needs to protect its military secrets, as well as its economic edge, to maintain its world-class stature. (Kirk, 1989:40)

Technology transfer issues coupled with other cooperative arms program issues creates a truly "volatile mixture" that the United States must face (Kirk, 1989:41). The U.S. response must be delicate, but firm. Zakheim comments in the following:

The Pentagon should develop a creative response to the challenge to technology transfer that developing EC/CMEA relations pose, particularly insight of the 1992 framework. Clearly, too hard an American line could provoke EC countermeasures against American companies, hurt US exports, and rupture the current consensus that governs the US/Western European/Japanese Coordinating Committee (COCOM), which regulates exports to the East. (Zakheim, 1988:68)

Regarding technology transfer between the European nations, like the U.S., they will be reluctant to transfer technology without adequate assurances that the receiving nation will protect it. In addition, the developing country will want a fair return on its investment. This could take the form of some prescribed ration of production contracts awarded to a nation in accordance with its percentage contribution to the innovative research. The eventual demise of European industry could result if the European governments continue to buy from the U.S. only to get the lowest prices on defense items. With the fair payback idea, even if the U.S. becomes a prime contractor for a European piece of equipment, rules will be in place to guarantee that European companies do an appropriate portion of the work (Cohen, 1989:6).

European government and industry officials involved in the F-16 aircraft program gave "high marks" to U.S. contractor and subcontractor representatives for cooperation and openness in the area of technology. There were no reported instances where U.S. firms withheld information or data that should have been released to the European company. The following were examples of beneficial new technology obtained by European firms as a result of F-16 coproduction:

--S.A.B.C.A. (Societe Anonyme Belge de Constructions Aeronautiques), a Belgian aircraft company, is gaining valuable new experience building and testing the advanced servoactuators used in the F-16's "fly-by-wire" system.

--DIG-I representatives in Denmark told us the contract for fire control computers will give them a production capability which is unique in Europe.

--KV (A/S Kongsberg Vaapenfabrikk), a large Norwegian firm, is entering a program to develop and produce a commercial maritime gyrocompass based on experience and technology gained through the F-16 program.

--DAF Special Products, a Dutch company which had never been involved in aircraft components, is now building F-16 landing gear with substantial technical assistance from the U.S. coproducer. (General Accounting, 1989:24)

Undoubtedly, some firms gained entry into a highly technological facet of industry that may have been unreachable if it were not for such constructive multinational cooperation.

The F-16 multinational program generally has been considered a success in the area of technology transfer, but in many other multinational programs, considerable frustration is experienced because of rigid U.S. restrictions. As Farr alluded to in the following, European countries sometimes have problems with the "stature" (or lack thereof) given them by the U.S. government:

The US usually retains veto rights on any potential third country sales whereas European countries depend heavily on the possibility of exports to make these programs economically feasible. Many longstanding US allies feel that they are treated just like the rest of the world, i.e. the US gives different versions of a system to different countries. In other words, some countries get systems with certain capabilities withheld. (Farr, 1989:69-70)

This attitude may have been understandable at a time when the U.S. was technologically dominant. Today however, in many areas of both product technology and process technology, the U.S. is simply not the primary figure (Farr, 1989:70). This may have an effect on final product price. There is general agreement that, at any given time, European weapon systems have consistently cost less than U.S. aircraft. One reason is that the U.S. typically strives for great advances in the state of the art whereas the Europeans tend to use proven technology in all of their new weapon systems (Gansler, 1989:306). A 1989 House Report stated that U.S. focus on "cutting edge technology" helps offset the numerically large force advantages of the Soviet Union (House of Representatives, 1989:9). The same House Report spoke to French and British focus on technology:

France and Britain have a different focus. Their arms include a higher proportion of more mature technologies involving less acquisition risk. Their arms industry clients, whether their own military or foreign customers, do not, in general, expect to field weapons across-the-board as advanced as those possessed by the United States or the Soviet Union. In this respect French and British acquisition organizations are often held to less demanding technological standards than their U.S. counterpart. This is not to suggest that they do not in many cases field state-of-the-art weapons. Instead, France and Britain are free to pick and choose where to concentrate on advanced

technology and when to leave the cutting edge competition to their American ally. (House of Representatives, 1989:9)

Part of the erosion in American dominance may be attributed to poor strategic business decisions. Cohen said the following:

The U.S. has had many high-tech starts in the past fifteen years. Usually, a few smart engineers with a good idea are the basis. Time and time again, these companies get into financial trouble for the same reasons. Either they cannot sustain the rapid growth for lack of good people or they become undercapitalized for expansion. They become targets for a takeover. Their cry usually is that "if we are not taken over, we will go out of business." So in the case of foreign takeovers, we say OK. (Cohen, 1989:11)

Technological change is critical to a successful evolution of defense industry. To a single firm, the ability to encompass technology within the organization's strategic framework is vital. Todd and Simpson add that economic markets and relations with the state both ultimately depend on the firm's technical initiatives (Todd and Simpson, 1986:170). Technology transfer can lighten the burden of development costs for firms aggressively pursuing technical initiatives. While excessive restrictions on technology transfer may limit market opportunities for U.S. defense companies, it may still be in the United States' best interest to protect certain critical processes and technology. These processes have allowed the U.S. to maintain a substantial lead in military aircraft technology, a lead which should not be readily given up. For the United States, success in Europe will largely depend upon maintaining a margin of technological superiority (Lopez and Yager, 1988:9-10).

Adaptation of Management Philosophies. The diagram shown in Figure 6 represents one view of the current military-industrial relationship in both the United States and Europe. In the U.S., overly-regulated business procedures have caused a polarization of government, industry, and the military. Figure 6 is a slightly modified version of chart number 01086 from the General Dynamics briefing charts (General Dynamics, 1988:01086); the modification was completed by the author using Harvard Graphics software. Across the Atlantic, trade and management philosophies centering on total economic unification are driving Western Europe toward a cohesive military-industrial-government team. A look at current U.S. and European management philosophies toward international trade will assist in understanding what measures the U.S. has taken or must take to strengthen its overall industrial competitiveness.

A significant difference in the European manner of handling defense industry is the centralized technique of defense acquisition. In actuality, most European countries favor the centralized approach as contrasted to the decentralized practices of the United States. Centralized purchasing refers to the situation where department heads (Navy, Army, or Air Force commanders) send all of their requisitions for purchasing to a central staff agency or department whose chief has authority to select the supplier and buy the requested item or something similar. The central agency (Ministry of Defense) decides which item will best serve

the military service's purpose with respect to quality, service or price. Centralized procurement is handled by a staff agency whose purpose is to buy materials, supplies, and equipment through a central office for all the departments of an

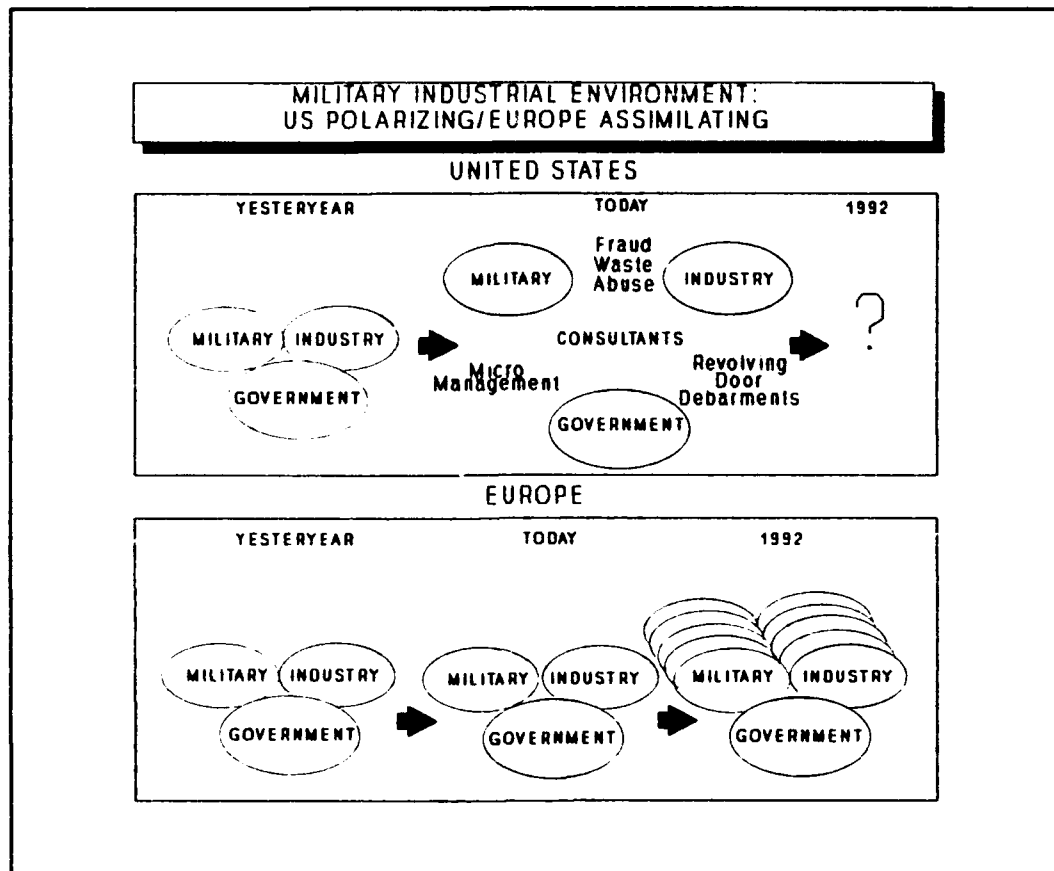


Figure 6 Comparison of United States and European Military-Industrial Environment

organization. Staff functions exist for the purpose of performing specialized activities for other departments, so that they are not required to carry out services for which they are not properly qualified, thus enabling them to perform their

own specialties better and more expeditiously (Hodges, 1961: 158-159). Hodges further outlines some of the benefits of a centralized purchasing system in the following statement:

Under the centralized purchasing plan, it is customary to issue a set of policies, in writing, for the guidance of the personnel as well as for all employees who have authority to issue purchase requisitions. This makes for uniformity of operations and prevents favoritism to the extent that the policies are observed. Within management, policies substitute the rule of "law" for the eccentricities of men. They help fix responsibility and boost morale. (Hodges, 1961:165)

Working within this centralized procurement system, the entire European Community should benefit from the successes of the prominent firms in the participating countries. One prime example is Dassault, France's only aircraft manufacturing firm. Through very small design teams, emphasis on incremental improvement of existing designs, minimal paperwork, maximum subcontracting, emphasis of low-cost design for domestic and international reasons, and a very close working relationship with the government, Dassault possesses the sort of desirable centralization characteristics after which other European firms will model themselves (Gansler, 1989:302). As further evidence of the success of centralized acquisition, Gansler offers the following:

Most European countries moved toward the centralized approach in the 1960s because they believed it would remove duplication of effort, would improve long-range planning and budget control across services and missions, and would achieve more uniformity in the approach to acquisition (including the interface between the government and the defense industry). Additionally, they believed that this would provide the acquisition organization with greater independence from the military services, and thus a greater

opportunity to develop a more "professional" acquisition corps. (Gansler, 1989:303)

The bottom line is that the French and British may make better decisions on what weapons to buy than do the U.S. military services because they have central procurement agencies. These agencies separate the buyers from the users, and that offers a good checks and balance system (House Report, 1989:650). Most European Ministries of Defense (MOD) have a single procurement agency for all military services. The MOD deals directly with industry and in a non-partisan way with the military services. The services provide their requirements to a central procurement authority in the MOD, then step out of the way for all practical purposes until the weapon system is delivered. They become involved again in operational testing of the delivered product and sometimes during in-process evaluations of the system. But for the most part, the services are excluded from the acquisition process (McAleer, 1989:51).

As previously mentioned, the MOD has unique, specialized procedures for carrying out its function. Even though the MOD serves as the single point of contact for the European military services acquisition needs, the specialized MOD procedures and the different operating standards of many European industries create the potential for conflict with the requirements of U.S. multinational programs. In the F-16 program, European government and industry officials often pointed to serious difficulty in complying with U.S. procurement regulations and cost accounting standards. Seeking relief from certain U.S. requirements before they participate in future cooperative

programs, the Europeans have suggested that they either be allowed to follow their own government regulations or modify U.S. regulations to fit European business practices (General Accounting, 1989:30). In Europe, there is a conscious effort to limit government involvement to the macro level; a "hands-off" policy is adhered to at the micro level with individual businesses and programs (Gansler, 1989:303). In contrast, the United States Congress reviews every line item in a budget request at least four times. Reviewers are the authorization and appropriations committees in both the House and the Senate. Services must testify to each of these committees in exhaustive detail. Most European countries have no equivalent process, and in fact some countries even go so far as to prohibit a line-item review by their legislative bodies (McAleer, 1989:51). The Europeans' long term fiscal plans allows them to see the financial impact of a future production program when a new development decision is made. Greater stability in resource planning and weapons requirements information is achieved. In the end, the Europeans are able to acquire more weapons for the limited funds available if allowed to use their established acquisition procedures (Gansler, 1989:303).

The individual Member States of the European Community will exhibit their own perspectives toward defense acquisition management. However, the success which Great Britain, Germany, and France have with harmonizing their acquisition philosophies with those of the United States will be viewed carefully by the other members of the European Community. Farr wrote about the

considerable importance of differing management philosophy issues, particularly between U.S. and European partners. He maintained that unresolved differences in management philosophy between multinational partners contributed to lower program success. Conversely, when European acquisition philosophies and procedures were adopted in U.S. programs, these programs achieved a higher rating of success. The key to success has a lot to do with how the program responds to such challenges (Farr, 1989:167-168).

Some analysts feel that the U.S. would be wise to be more receptive to European business practices, especially in the area of cooperative multinational programs. Currently, the U.S. acquisition process provides incentives to underestimate costs and to focus primarily on technical questions. An independent assessment similar to that offered by the centralized acquisition agency in the European system would provide a strong emphasis for the idea of affordability (Gansler, 1989:310). Gansler outlined the following characteristics of the European system that the U.S. should consider emulating or at least be keenly aware of:

1. Strong centralized decision-making -- on long-term budgets and programs as well as on procurement policy.
2. Long-term (multi-year) stability in programs and budgets.
3. Specification by the services of "mission" (performance) requirements rather than "weapon" (design) requirements.
4. Early emphasis on cost as a design requirement and on long-term "affordability" of weapon systems.
5. Professionalism throughout the acquisition community.

6. Explicit consideration of the industrial base in acquisition decisions and budget planning. (Gansler, 1989:308-310)

Another assessment of the characteristics of European acquisition practices was provided in a 1989 report by the House of Representatives Committee on Armed Services. The committee reported that differences in culture, national objectives, acquisition policies, and weapon system performance goals are reasons not to copy the French and British centralized acquisition systems. The following excerpt from the report identifies the complexity that such a change would mean to the United States:

[B]oth France and Britain have realigned their entire defense establishment, not just procurement. Coordinated military requirements and budgeting, as well as procurement, are integral parts of the French and British "centralized acquisition" systems. Creating a "central procurement agency" in the United States, without the other realignments made by these two countries, would not be the equivalent of their "centralized acquisition" systems. It is difficult to envision how a central procurement organization could work if each service retained independent authority to define its operational requirements and to control its own program plan and budget. (House of Representatives, 1989:10)

Though the committee believed that the United States should not copy a typical European acquisition system, the following three aspects of the French and British systems are particularly important:

1. Professionalism and training of acquisition personnel.
2. A stable budget environment that allows for rational planning.
3. "Chains of command" that provide program managers and acquisition personnel with both authority and independence. (House of Representatives, 1989:11)

The Europeans recognize that as buyers of defense-related equipment, they have a responsibility for the health of their defense industries and the people in the defense acquisition community. The U.S.' "next airplane" way of thinking should evolve into a "military mission need" way of thinking that introduces nontraditional solutions into the realm of possibilities. The resultant program stability can greatly improve efficiency and resource utilization (Gansler, 1989:309).

Differing management philosophies will be a critical source of contention between the U.S. and the Community in the coming decades. European acquisition environments are much "less legalistic" than that of the United States; in parliamentary systems the legislature requires accountability "after the fact" rather than during, and after, as in the United States (House of Representatives, 1989:9). To ensure progress in improving relations between these two partners, carefully selected legal tools by either side may have a positive effect on future dialogue. In consideration of the sort of economic and political issues that are likely to be on the U.S.-EC agenda in the near future, Carter proposed the following legal code of conduct:

1. Avoid formal legal arrangements as much as possible.
2. If there is going to be a formal agreement, avoid treaties under US law. Choose executive agreements instead.
3. When it comes to resolving disputes, select international arbitration rather than courts.
(Carter, 1988:131)

Formal legal arrangements can limit the flexibility and efficiency necessary as the U.S.-Community relationship evolves into a working partnership. Such arrangements should be avoided especially in the early stages of Community development when the emphasis is on resolving disputes, strengthening relations, and creating new institutional ties. It is not simply a matter of which partner has the best procedures in place, but rather which procedures will work best for both.

Any attempt to determine what the Europeans do better than the Americans, or vice-versa, will probably end as it began -- as a futile argument. Gansler summed up the success which both partners have achieved in their push for international programs in the following:

In attempting to answer the question of how well the Europeans do in comparison with the United States, we must recognize that, although their approaches to weaponry differ, both the Europeans and the Americans achieve the objectives they set out to realize. Whereas the Americans emphasize the objective of maximum performance in each individual weapon (and, thus, one would measure success by comparing American systems with others on the criterion of performance), the Europeans set out to minimize cost and risk in order to achieve an acceptable defense posture within their limited resources and, simultaneously, to achieve an advanced technology capability and a stable labor force in their industrial sector. (Gansler, 1989:305)

Summary. European Community 1992 offers opportunities for companies that previously found Europe too fragmented to be worthwhile in a business relationship. As technical barriers are reduced and management philosophies are harmonized, the consolidation of European companies will create a market with new customers that will be very attractive to American business (Magee, 1989:84). The industrial

competitiveness of the United States should blossom in step with the European momentum.

Creation of Business Alliances. The international arms market has been marked by intense competition among an increasing number of suppliers. This is occurring simultaneously with a leveling off in the demand for new major weapon systems. Budget limitations and rising prices require potential buyers to look closer at refurbishing and modernizing existing systems, which currently accounts for a rapidly growing share of international arms trade. To successfully compete in this market, many European and U.S. manufacturers are turning more to collaboration in what could be labelled "arranged marriages." Both the U.S and European governments, and their respective industries, have been forced to move into joint ventures and other multinational consortia to spread the increasing costs resulting from the complexity of new systems (Sullivan, 1990a:17).

The internationalization of aerospace defense production is rapidly increasing. This is in large part due to the fact that defense production capabilities are matters of national security. Also major defense acquisition decisions often have considerable political and economic consequences (Lopez and Yager, 1988:51). European companies are increasingly recognizing the advantages of working together in research and development. The importance of this type of collaboration will increase as companies exploit the benefits of completing the single European market (Department, 1989:49). Two major

programs designed to encourage European collaborative R & D are the Community's own R & D Framework Program and the market-led EUREKA program. The R & D Framework Program, worth at least \$5.5 billion between 1987-1991, gives priority to two areas where technology collaboration is particularly important: information technology and telecommunications. The largest sub-program within the Framework Program is ESPRIT (European Strategic Programme for Research and Development in Information Technology). Primarily concentrated on microelectronics and software technology dealing with information systems, ESPRIT's second phase is worth about \$1.5 billion. Todd commented on the success of the ESPRIT program:

ESPRIT has succeeded in bringing about a dramatic turnaround of the situation by providing the money and the infrastructure to allow companies in different EC countries to join forces and cooperate on research and development, instead of duplicating their efforts.
(Aubin, 1988:58)

The EUREKA program, though distinct from the R & D Framework program, encourages industry-led collaborative projects aimed at producing high-tech goods and services in the entire spectrum of R & D. EUREKA has 19 member countries: the 12 EC Member States and Austria, Finland, Iceland, Norway, Turkey, Sweden and Switzerland. EUREKA participants can request support from their governments in removing market barriers to open up the European market for world-wide sales (Department, 1989:49-50). Non-EC firms also may participate in these programs through an invitation from one of the EUREKA countries on a case-by-case basis. The growing focus on European

collaboration actually encourages the development of cooperative projects with non-European firms.

One reason for the increase in international business collaboration is that government spending on defense items is dwindling. The costs of developing and marketing new aircraft have grown beyond the capacity of individual firms (Gold, 1989:42). At the same time, more countries have acquired greater technological ability, making the global marketplace more competitive. Aubin states, "These developments have spawned an era of international collaboration, not by choice but by necessity (Aubin, 1988:57)." A lot of U.S. companies are trying to figure out how to establish themselves with a firm presence in Europe. The standard U.S. strategy of mergers and acquisitions will probably not work in the defense field (Gold, 1989:43). The foreign investments that do occur in aerospace are usually related to gaining access to either markets or technology; this explains why the majority of aerospace industry investments occur within the major industrialized nations (Aubin, 1988:57). The Boeing Company's purchase of DeHavilland Aircraft, and Sikorsky's purchase of a share in Westland are two examples of this type of investment (Lopez and Yager, 1988:35). However, in Europe what is expected is a major increase in joint ventures and teaming arrangements as a way for U.S. business to get its foot in the door (Gold, 1989:43).

As shown in Figure 7, European industry is moving quickly forward with joint ventures and other teaming arrangements

within the European Community. Following this lead should create very favorable opportunities for U.S. businesses. Using the West German defense industry as an example, Ezell wrote the following:

Many U.S. businesses can capitalize on the strength of the West German defense industry in much the same way that small and medium enterprises in Germany will: by selling themselves as subcontractors for a larger weapon system. Now may be just the right time for U.S. companies to join with West German firms, although anyone who does should not expect immediate favorable reaction from their initial overtures to prospective partners. Europeans generally consider investments from a long-term perspective, which is perhaps how U.S. businesses will have to approach life on their side of the Atlantic. (Ezell, 1990:31)

The scale shown in Figure 7 depicts the relative positions of European and U.S. industry in response to current trends in global markets. Figure 7 is a modified version of chart number 20 from Vollmer's briefing charts (Vollmer, 1989:20); the modification was completed by the author using Harvard Graphics software. As U.S. dominance in aerospace becomes more and more questionable, nurturing long-term international industry relationships has become more important. Says McDonnell Douglas Helicopter Co. spokesman Rob Mack, "We're trying to develop short-term arrangements into valued relationships. We didn't think it was that important before (Gold, 1989:42)." Gone may be the days when large U.S. aerospace firms could be assured adequate resources to produce advanced weapon systems and the "ready-made government markets" in which to sell them. The marketplace has changed in a way that mandates more attention to world markets (Aubin, 1988:57).

The trend toward collaborative defense production will cause difficulty for U.S. industry making off-the-shelf product

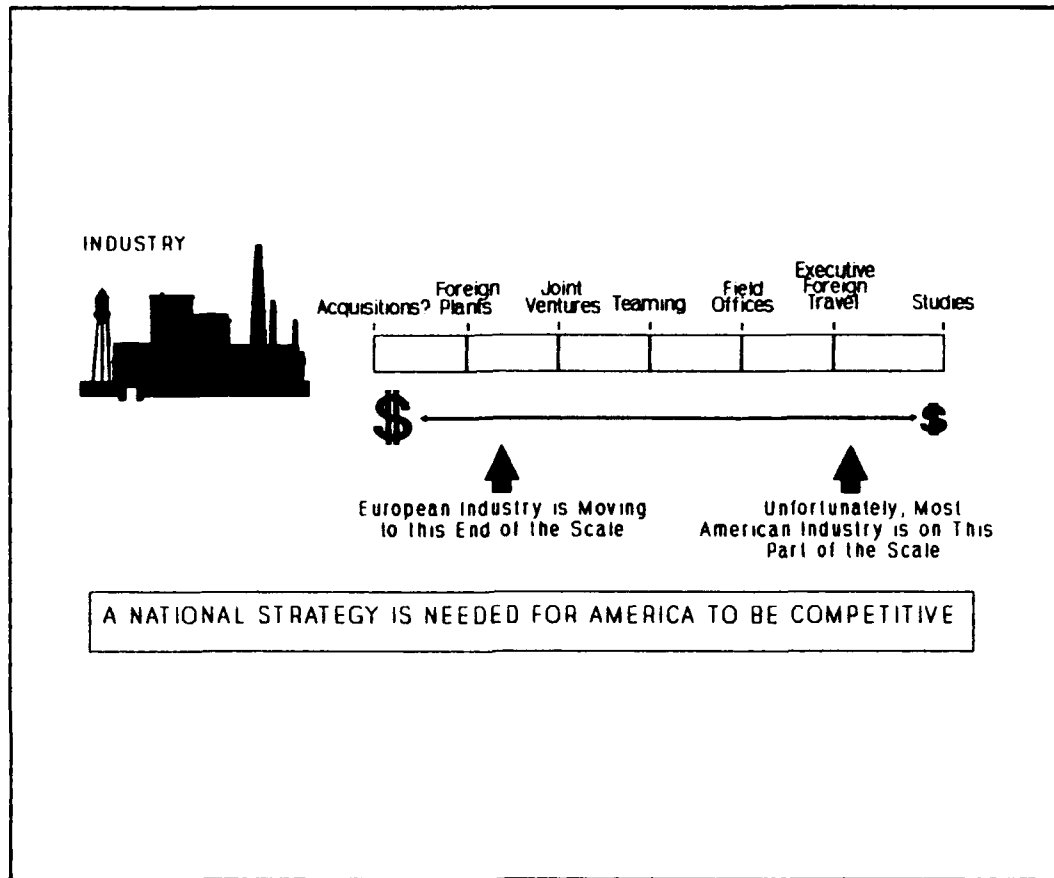


Figure 7. Scale of European/American Industrial Strategy

sales to Europe. Political considerations sometimes rule out the purchase of an off-the-shelf product even though it may be the best alternative from a practical standpoint (Lopez and Yager, 1988:51). While increased U.S.-European collaboration will continue, there clearly is a nationalistic desire among Europeans to produce European weapon systems (Aubin, 1988:59). According to Lopez and Yager, the reasoning for collaboration

on defense products is similar to that for commercial joint ventures:

Collaborative arrangements pool resources and technical strengths, and the longer production runs resulting from access to several markets promise lower costs. Major defense projects require a significant budget commitment, but also a significant share of a nation's scientific, engineering and management personnel, and production facilities and equipment. International collaboration offers a way to lessen the commitment to any single product, and therefore lowers the risk involved. (Lopez and Yager, 1988:51)

The strong international connections that are already in place between the U.S. and Europe will be enhanced by EC-92. By nature, the aerospace industry is a transatlantic entity and may indeed be the "world's first global industry (Aubin, 1988:59)." The potential for European firms to supply a larger portion of the U.S. defense acquisition requirements in the future is very high. Such a development, coupled with a more competitive European position in defense industry, will probably drive down prices and give the Department of Defense an alternate supplier for future procurements (Aubin, 1988:59).

The advantages of international collaboration have led to a number of types of international cooperation. The objectives of any such collaboration, according to Lopez and Yager, include the following:

- Securing needed products at the lowest costs.
- Lessening the balance of trade impact of non-domestic purchases.
- Increasing domestic employment.
- Improving the high technology production base.
- Possible expansion of markets.

-- Possibility of recouping R&D investment through exports.

-- Creation of jobs. (Lopez and Yager, 1988:51-52)

Other benefits include the reduction of financial burden on independent contractors involved in product R & D, and the development of a common mobilization base (Vollmer, 1989:12). These benefits will be maximized to the extent that an acceptable level of efficiency is also maintained. Debates between governments often occur over the right balance of domestic versus foreign design and production. Exports balanced by offsets, licensed production, co-developed and co-produced systems are the options to be optimized (Lopez and Yager, 1988:51). In the European Community, joint efforts are becoming the acceptable economic routes to take, both in research and development as well as production. In an increasing number of cases, national sovereignty is sacrificed in favor of a cost-effective collaborative effort (Ezell, 1990:32).

There are also disadvantages to consider when dealing with international collaboration. Lopez and Yager state that, for the United States, the clearest disadvantage is in terms of technology transfer as an assist to other nations competitive stature. Technology transfer in aerospace is primarily from the United States to other countries; today's collaborator could very easily be tomorrow's competitor (Lopez and Yager, 1988:52). For example, many of the contractors in the European Fighter Aircraft (EFA) consortium have had recent significant cooperative projects with U.S. defense companies. If the

Europeans succeed in EFA production, that plane could become the mainstay of European air forces, effectively displacing some U.S. produced fighters in the European market (Aubin, 1988:59). Other disadvantages of collaboration include the European fear of losing independent arms producing capabilities because of specialization in cooperative projects, an overemphasis on expensive offsets, the actual agreement process required for collaboration, and high administrative costs (Lopez and Yager, 1988:52-53). Also the proliferation of defense weapons and the technology to produce them may be viewed by some as a stumbling point for the achievement of world peace (Vollmer, 1989:12).

It does appear that the benefits of collaboration outweigh the disadvantages. Although optimal cooperation is not easily accomplished, the rising economic costs of advanced weapon systems, arms market overcapacity, and regional security interests argue favorably for arms collaboration (Lopez and Yager, 1988:53). While the emerging new market realities may have "pitted Yankee size and technology against European buying power (Bluestone, 1981:89)," both the Europeans and the Americans seemed to have learned how to mix the two for each other's benefit.

Equitable Partnerships. The road to a successful alliance may often be rocky, but the benefits that one company may give to another absorb some of the shock. For example, an alliance with a major company can boost the credibility of a small company, yet the large company can benefit from the small

company's innovations without expending resources of its own (Marrus, 1990:A18). Active collaboration with competitors requires careful negotiation of the ruling agreements. While there are no concrete answers to how a partner should begin its approach to a cooperative arrangement, Marrus offers the following guidelines:

- Have only one chief and a small team. One person must have clear responsibility and authority to orchestrate the negotiation.
- Put experience on your team. If a company has no experience in negotiating, it is advisable to seek assistance from an outside consultant.
- Look for common interests. In one negotiation, the potential partner thought its smaller company target wanted technical help when in fact the first motivation was money to fund development. The sharing exercise brought the true motive to light.
- Choreograph the negotiation in detail. Negotiating involves high stakes and nothing can be left to chance; each step has to be choreographed.
- Gather intelligence at informal meetings. Not all deals are thrashed out at the table.
- Keep the top brass out until the end. Senior management is set up as a court of last resort. If there is an absolute deadlock over negotiations, top executives can always be brought in to resolve the situation. (Marrus, 1990:A18)

Even after the cooperative relationship is underway, Farr stated that the partners in the ventures often assess their contribution versus the value trade-off for other participants. He wrote the following:

If any partner tries to dominate the venture, or if benefits are perceived to be inequitably distributed, one or more of the partners may choose to leave the arrangement. Whenever partners withdraw from a project, financial pressures are created and the sudden absence of specific skills or resources could cause the project to fail. (Farr, 1989:131)

A primary reason given by some U.S. contractors for their disappointment with cooperative programs is the tendency to overshare technology with the international partner for little return. Prime contractors argue that if U.S. firms were allowed to more easily form joint ventures and combine capital resources with other American companies, they would not need to seek as many foreign partnership arrangements for development programs. These contractors argue that much of the technology transfer that is currently taking place would be eliminated for the benefit of U.S. industry as a whole (Bluestone, 1981:182).

Farr reported that a contribution of money in place of technology was not considered a viable alternative in a successful alliance. He added that international cooperative projects are more likely to be successful if the partners have "relatively symmetrical technical capabilities and industrial resources (Farr, 1989:132)." With the idea that no partner should prosper at the expense of another, Farr wrote the following:

As part of this balancing process, it is necessary to assess the technical capabilities and infrastructure of each participating nation at the beginning of the project. One key to successfully balancing contributions and benefits is to know what each country is able to contribute. For example, problems may result if a partner desires direct offsets in an area of high technology but lacks the infrastructure to absorb high technology work. (Farr, 1989:133)

Foreign partners who are financially strong, but technologically weak, are often the more willing partners in joint ventures. The benefits with respect to trade balance, increased domestic employment, and technology transfer have

caused a striking trend toward increased collaborative projects (Bluestone, 1981:177). The larger, often more diversified firms may be in a better position to take risks with innovations and collaborative projects that would not normally be considered by smaller, more specialized firms (Todd and Simpson, 1986:143-144). The benefits afforded the smaller firms may actually be a better deal than that of the larger firms since cost shares in the cooperative programs are generally lower for the small firm. However, the contribution of key technologies not available to the larger firm tend to outweigh the cost share as the only relevant measure of contribution (Farr, 1989:135).

In the selection of a partner for a joint venture or other collaborative arrangement, careful identification of controllable issues is critical to a harmonious relationship. Farr outlined J. Michael's Geringer's suggestions for effective cooperation between business partners. The characteristics that need to be present and the actions that need to be taken are as follows:

1. Complementary Technical Skills and Resources. . . . Technical complementarity may assume many forms, including one partner supplying technology with the other partner providing marketing, financing, or some other skill or resource.
2. Mutual dependency: A Necessary Evil. . . . If the level of dependency is too small, the venture may not survive difficult times; and if the dependency is too great, the alliance may become unstable due to fear of the consequences of losing the partner.
3. Avoiding Anchors. . . . The term "anchor", as used here, refers to a potential partner's inability or unwillingness to provide their share of the funding, which can lead to disastrous results in the early stages of a venture.

4. Relative Company Size: The Elephant and the Ant Complex. The message here is that, with few exceptions, joint ventures are more likely to succeed if both partners are comparable in sophistication and large in size.

5. Strategic Complementarity: A Prerequisite for Long Term Success.

6. Evaluating Compatibility Between Partner's Operating Policies. Operating policies should be similar. Failure to resolve such differences can result in disagreements regarding the timing of purchases, allocation of costs, differences in production schedules, and other difficulties.

7. Being Aware of Potential Communication Barriers. . . . Simple straight-forward terminology may be particularly important during negotiations and follow-up sessions.

8. Compatible Management Teams Reduce Problems.

9. Trust and Commitment: Essential Elements of Long-Term Relationships. . . . Experienced managers emphasize that the building of mutual trust and understanding are far more important than the written document, which is often treated as more of a symbol of commitments already made. (Farr, 1989: 29-32)

The success of international teaming arrangements for research, development and production of defense equipment will depend on commitment to program implementation and the solution of technology transfer issues. Cooperation of defense aerospace systems has become a "reasonable and attractive alternative" to purely domestic production or buying off-the-shelf products from overseas. The shrinking defense budgets, and the need to solidify the global industrial base are compelling reasons to collaborate (Lopez and Yager, 1988:70).

Summary. In the international market being created by the United States and the European Community, an entirely new vocabulary is needed to describe the collaborative business arrangements cropping up between these two partners.

Concessions on co-production agreements, joint licensing arrangements, and offsets are often more important than product price, maybe even more important than quality and maintainability (Bluestone, 1981:84). The European Community will ultimately make European industry more competitive with that of the United States, but in the process U.S. access to European technology should also strengthen American business. This will take significant effort on both sides:

Joint ventures between U.S. and European firms will supposedly provide access to European technology. If it is by osmosis, perhaps, but if one thinks that a U.S. company will be made privy to a European partner's advanced technology by virtue of a single joint venture, the drug police have a good suspect. Significant intra-European cooperation could translate into diminished trans-Atlantic cooperation. (Cohen, 1989:14)

Effect of EC-92 on NATO

Any discussion on the effect of the European Community upon the United States will certainly include mention of the impact on the North Atlantic Treaty Organization (NATO). A comprehensive understanding of the EC-U.S.-NATO linkage cannot be ignored. This section will examine the possibility of the disillusionment of NATO along with the evolutionary course the alliance may take.

Is Disillusionment a Potential Reality? In a lengthy study of Atlantic military relationships, Calleo surmised that the long-range viability of NATO depends on the relationship between military needs, their economic costs, and the effects of the way these costs are financed or "burdenshared" by alliance members (Calleo, 1989:119). A look at each of the

factors individually will aid in determining whether or not NATO should be dissolved.

Military Needs. Gansler wrote that the U.S. and Europe are concerned about the large quantities of conventional weapon systems of very high quality that the Soviet Union can deploy against the NATO forces (Gansler, 1989:300). This possibility is not as far-fetched as it may sound. Many governments recognize that NATO and the Warsaw Pact are not on the same level of "political and moral legitimacy"; the Warsaw Pact, unlike NATO, is an imposed alliance (Wallop, 1990:B3). If the current highs of glasnost and perestroika are abandoned, the cold war could return as suddenly as it ended, and with a "far greater probability of becoming hot than any time in the past 40 years (Lake, 1989:74)." If the U.S. and Europe are being lulled into a false sense of placidity, the results could be devastating, as Lake wrote in the following:

If NATO and the United States together or separately succumb to Soviet temptations, the ability of the West to defend its freedom could incur irreparable damage. Once armed forces have been deactivated it takes too long to get them back. It must await the judgment of future historians to assess the correctness of the decisions facing Western leaders today. (Lake, 1989:74)

Any restructuring of NATO's military strategy should be based on the security interests of the Europeans, not necessarily on the potential economic benefits derived from glasnost and perestroika (Fiumara, 1989:24). The focus of the alliance should remain on the military threat; the NATO member nations cannot be distracted by the "economic and political euphoria of lucrative financial prospects and unrealistic arms

control agreements that glasnost may potentially provide (Fiumara, 1989:26). General John R. Galvin, Supreme Allied Commander, Europe, warns that the Soviets want the United States out of Europe, a denuclearized Europe, and ultimately the dismantling of NATO. However, the NATO position is to provide a strong common defense while encouraging talks with the Soviets (Wilson, 1989:17). Many Europeans are worried that these talks of balanced forced reductions will actually increase European vulnerability; a reduced American military presence will further divide the capabilities of conventional forces and weapons between the Warsaw Pact and NATO (Strange, 1989:110). Taking this point of view further, Strange wrote the following:

Taking out the intermediate missiles removed the stabilizing elements in the stand-off. Leaving the battle-field nuclear weapons as they were, left the least stable, most-susceptible-to-misperception, weapons behind. So that while the agreement was balanced for the super powers, it was unbalanced for Europe. Or, at least, it would be unbalanced until the asymmetry in conventional forces was reduced by Soviet-American agreement. (Strange, 1989:110)

The NATO alliance has been held together for 40 years by the Soviet military threat. In this time, Cold War issues dominated and Western Europe rarely questioned the military leadership of the United States. Now, trans-Atlantic ties are being pulled, and occasionally severed, in many directions (Riding, 1990:1).

The European concern for their own self-interest is encased in a fear of becoming involved in American global crises (Fiumara, 1989:7). The potential for at least a semi-

independent approach to Europe's defense posture has been postulated within the Western European Union (WEU). This seven member body consisting of France, Britain, Italy, West Germany, Belgium, Netherlands, and Luxembourg possesses the military capability to deter a threat. In 1987 the WEU sent warships to the Persian Gulf to help keep the Gulf open for navigation; the synergy and common interests within the WEU enables such an action to take place (Fiumara, 1989:7). Recently, West German Chancellor Helmut Kohl commented on the need for review of NATO's military strategy:

The Western alliance will have to review and enhance its military strategy and structure in the light of the new international environment. The Warsaw Pact, too, is to be restructured, both in terms of its strategy and military potentials. (Hoagland, 1990:A29)

Though European security is still somewhat dependent on U.S. direct involvement, economic independence resulting from EC-92 may spawn strong European desire for military autonomy.

Economic Costs. The political and economic drama being played out in Eastern Europe has pivotal implications on the strategic plans of NATO. The crumbling of Communism in the Soviet bloc is seen by many as a golden opportunity for NATO members to make deep cuts in their defense spending (Sullivan, 1990b:14). Georgy Arbatov, a key Kremlin figure said, "Our major secret weapon is to deprive you of an enemy" (Wilson, 1989:17). The secret weapon is apparently working. A number of European nations are questioning large defense expenditures when there is no obvious threat. There is even talk of neutrality in some areas (Wilson, 1989:17; Lake, 1989:74). The

European Community has created prosperity in Europe's relative economic strength. Unfortunately, the result of this opulence in economic factors requires a change in people's perceptions, a change which is often difficult to accept (Ely, 1989:78).

The Controversy Over Burdensharing. As has been stated earlier, it is advantageous to NATO for Europe to have a strong defense industry. A strong European industrial base could provide more capability for sustaining combat forces, more interoperability between allies, and the ability for European countries to provide additional funds for their conventional defense (Kirk, 1989:39). The increase in the funds could help ease political pressures on Washington for increased burdensharing by the Europeans.

The concept of NATO burdensharing has been a subject of contention for a long period of time. Western Europe wants the United States to provide a security shield against the Soviet Union, yet Western Europe is also eager to take charge of its own destiny and reduce Washington's political and economic role (Riding, 1990:3). The issue of burdensharing is always highly politicized since it ultimately deals with the allocation of national resources based on a series of highly subjective judgments (Fiumara, 1989:10). In the United States, the growing sentiment in Congress is to reduce the number of troops in Europe due to a "mood encouraged by a feeling that NATO allies are not paying their fair share of the cost of common defense" (Wilson, 1989:18). The feeling in Europe is that costly weapon systems may begin to look "embarrassingly out of

line" given developments in Eastern Europe unless the weapon systems can be shown to be part of an overall restructuring and rethinking by NATO (Sullivan, 1990b:14). The barometer of relative national contribution is often coupled with a percentage of gross national product and economic potential. Fiumara reported the following:

The Allies enjoy roughly a \$100 billion annual trade surplus over the US. The US spends 6.8 percent of its gross national product on defense, compared with an average of 3.3 percent for NATO Europe. The last time the Pentagon submitted an annual report on the US commitment to NATO in 1982, the figure reached \$123 billion or 56% of the US defense budget. This figure can vary from \$2 billion, the incremental costs of posting troops in Europe, to the entire \$300 billion budget. When one considers all the forces available to NATO, the Allies provide 53% of the tanks, 46% of the artillery, 54% of the combat aircraft, 83% of the combat ships and 58% of all active duty and 80% of all reserve personnel. (Fiumara, 1989:10)

However, looking only at these numbers to measure burdensharing may actually give a distorted view. Other factors such as ammunition availability, logistical support, and levels of training should also be considered (Peebles, 1988:10). Other intangible, and often overlooked, aspects of defense burden include the costs of maintaining conscription and the costs of providing facilities and support for military troops (Fiumara, 1989:10). Many Europeans are gravely concerned over the social costs that the NATO alliance has deposited on them. Damage to the environment from pollution, property damage, and even occasional deaths to civilians from training exercises has adversely disrupted the normal citizen lifestyle (Peebles, 1988:40). European domestic pressures have

recently succeeded in curtailing low level training flights and army ground maneuvers in Germany (Fiumara, 1989:10).

Another reason for the concern over burdensharing is the connection between defense spending and trade. As Europe moves closer to the single market of 1992, the U.S. is becoming more sensitive to trade practices of the European Community. Not only are the fears of a reduced U.S. industrial base a major concern, but the increased West European trade with Eastern European countries is likely to cause friction (Hitchens, 1989a:38).

As the European nations grow economically, their ability to contribute to defense will increase, but the nations and their people also will demand a larger share of influence in the decision-making process (Fiumara, 1989:11). The U.S. policy making apparatus must be flexible. In the past, the U.S. has felt much better informed than the Europeans about economic, military, and political matters dealing with NATO; this created a rather slanted dialogue where the U.S. was not particularly receptive to European views and advice (Ely, 1989:78). U.S. demands for more burdensharing may sound reasonable to economy-minded politicians, but it may come at the cost of less U.S. influence in running NATO (Lake, 1989:74). Such a development could conceivably start a domino effect leading to the dissolution of the NATO alliance.

Evolution of the Alliance. West German foreign minister, Hans-Dietrich Genscher has a vision for the future of Europe and NATO. He said the following:

It will be a Europe which is no longer antagonistic, where each country recognizes that an advantage for one is an advantage for all. The military alliances will remain for a long time to come, but they will grow more political, and their armed components will eventually shrivel away as the continent builds up a new system of cooperative security structures between East and West. (Aepfel, 1990:A18)

Secretary of State James Baker asserts that NATO will become the forum where agreements between the East and West will be negotiated, implemented and verified (Adams, 1989:1). The internal political structure that NATO maintains will be ideal for direct communication of a myriad of types of information throughout the European Community. Closer political discussions and institutional links between NATO and the Community will coincide with the plans of the "Baker Blueprint." In this plan, among other suggestions for the future of Europe, Secretary Baker states that NATO should "evolve into a political alliance as its military role diminishes." As the need for political discussions grows, NATO will develop into a more important key transatlantic body, even after reductions in defense budgets and military troop levels have undercut the alliance's traditional source of strength (McAllister, 1989:25; Adams, 1989:29).

Influential persons have taken exception to the Baker Blueprint. Manfred Woerner, NATO Secretary General, took issue with Secretary Baker's call for closer institutional ties between NATO and the European Community. Emphasizing the point that NATO does not feel any sort of rivalry with the European Community, Woerner stated the following:

Since all of the EC nations, with the exception of Ireland, are members of NATO, there is no need for

institutional links. Of course, there is a need for exchanging information, since we overlap in our membership. What we need is a flow of information. (Adams, 1989:29)

Sharing similar views, President Francois Mitterrand of France does not believe that a "United States-dominated NATO" should manage changes in Europe. He feels that the economic integration of the European Community, with or without NATO, can best be handled by the EC itself (Riding, 1990:3).

It is clear that continued economic prosperity may be in jeopardy if the security of Western Europe is at risk. Paul Kennedy, author of The Rise and Fall of the Great Powers, cautioned that "we cannot enjoy security without economic prosperity" (Fiumara, 1989:11). The relatively abrupt shifts in the military hierarchy and the political mechanism in Europe are factors that NATO must deal with. These factors, combined with the economic potential of the West European nations are a few of the greatest strengths of NATO, but this capacity also has the potential to create serious rifts in the Alliance (Fiumara, 1989:11). Fiumara provides a generally agreed to idea of the entity that NATO should become in the following:

NATO should continue with the predictable, defensive deterrent strategy while expanding its focus toward a more unified economic, political and cultural strategy to fortify and compliment its military strategy. The key here is a consolidated effort divorced from the concept of unilateral negotiations that made the INF Treaty so controversial. NATO must retain the ability to act on a progressive scale of military options that signal the intent and resolve of the member nations. NATO should continue to respond to perestroika . . . but recognize that this is a diplomatic and economic strategy which contributes to but does not replace military strategy. (Fiumara, 1989:25)

Summary. The connection between the European Community and NATO must be addressed as negotiations continue on the future position of European economics and politics. While the EC and NATO are separate and distinct, the overlap of the two offers advantages and disadvantages to the goal of successful economic integration. An examination of the current military threat to Europe, the tangible and intangible economic costs of NATO to both Europe and the U.S., and the political issues surrounding burdensharing provide insight into NATO's evolutionary path. Flexibility may be the key as the NATO alliance transforms out of its strictly military role into a more political and economic oriented assembly geared towards the same results as European Community 1992.

Research Model

As stated in Chapter 1, the secondary data for this study was obtained using a figurative model as a guide. The model in Figure 8 not only provided a foundation for the research, but also provided an organizational framework for the literature review. Figure 8 is a slightly modified copy of the diagram on page 38 of Lopez and Yager's joint project of the Aerospace Research Center and the International Council (Lopez and Yager, 1988:38). The figure was modified by the author using Harvard Graphics software.

Figure 8 illustrates how the U.S. aerospace industry has had to overcome "domestic purchase preferences" which tend to be highly influenced by government priorities (Lopez and Yager, 1988:37). As shown in Figure 8, and as was explained in the

literature review, direct investment has often not been a useful alternative for the aerospace industry. Lopez and Yager explained:

U.S. aerospace manufacturers have not set up significant manufacturing facilities abroad largely because transportation costs were not enough of a factor to influence location overseas. Establishing production in a variety of overseas locations seldom made economic sense where the production of such a complex product as an aircraft was involved. (Lopez and Yager, 1988:37)

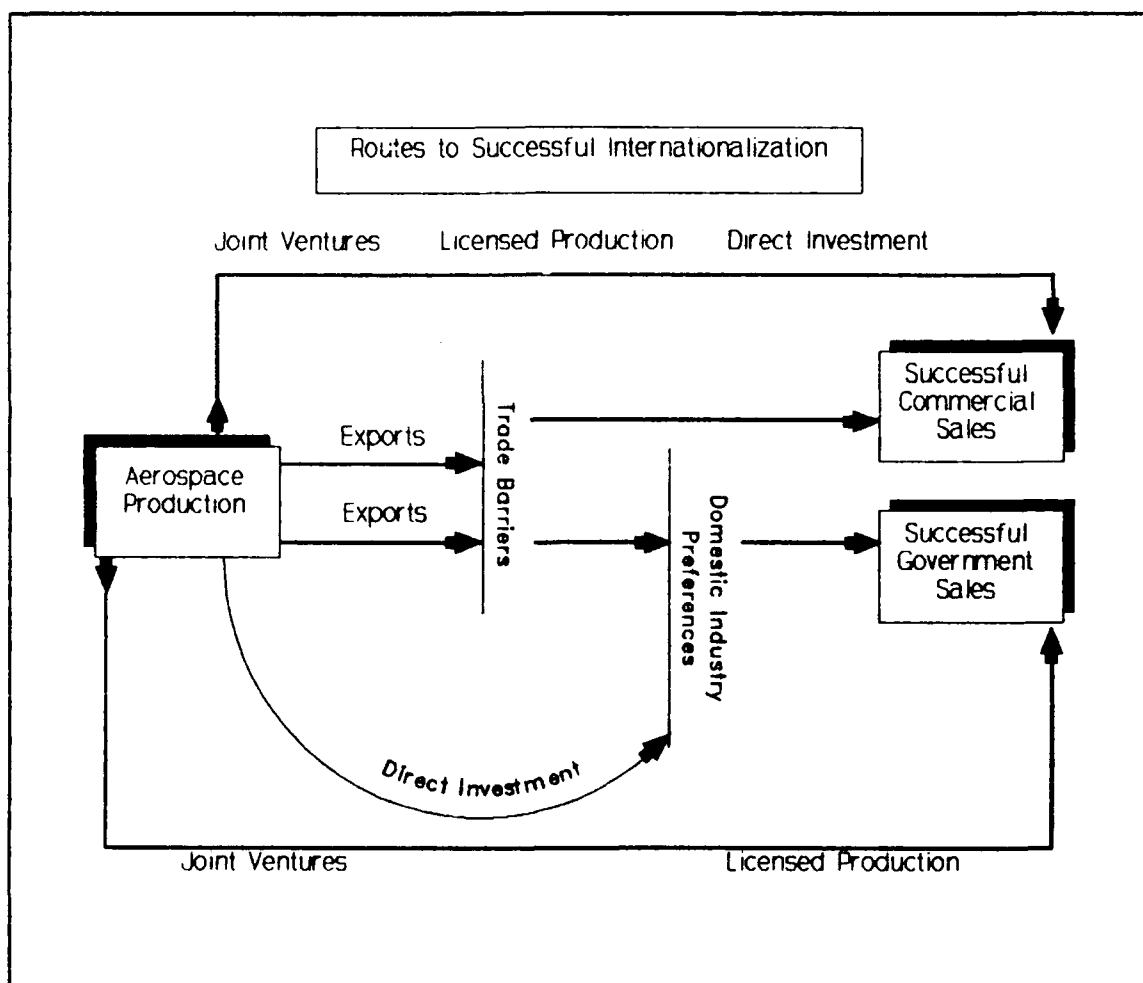


Figure 8. Initial Research Model

The other two forms of internationalization, joint ventures and licensing, are not necessarily mutually exclusive from direct

investment since a joint venture can often necessitate both overseas direct investment and the licensing of key technology (Lopez and Yager, 1988:37). These three types of internationalization, though important, were not addressed in great detail in the literature review. Excellent research on these areas is readily available: i.e. Lieutenant Colonel C. Michael Farr's Defense Systems Management College research report (Farr, 1989); Virginia C. Lopez and Loren Yager's joint research project (Lopez and Yager, 1988); or Jacques Gansler's book titled Affording Defense (Gansler, 1989).

This study did address factors related to the central portions represented in Figure 8. In some way each section of the literature review relates to aerospace production, commercial or government sales, export and trade considerations, and the preferences of the defense industry, both American and European. The integrative model in the conclusion of this study builds upon what has been established in the literature review. The analysis of the interviews, presented in the next chapter, provides the primary data necessary for a newly developed model.

III. Analysis of the Interviews

Chapter Overview

This chapter contains the responses to the personal interviews conducted as part of the research for this study. The interview guide used during the interview process is located in Appendix A of this study. The contemporary and dynamic nature of the issues surrounding European Community 1992 require the continuous addition of new primary data to information already published. As was previously stated in the research method section, personal interviews with experts in the field provided this important primary data.

In some instances, a statement is made which normally would warrant a citation identifying where the idea originated. Because some of the interviewees requested not to be attributed to their responses, citations are purposely left out in order to maintain the promised confidentiality.

Improving the U.S. Defense Acquisition Environment.

Those involved in U.S. defense acquisition are compelled to measure customer support on the basis of what is heard from the customer. The success of an international program is often evaluated through "absences." The absence of customer complaints or the absence of negative feedback is the achievable goal that so easily can escape from the grasp of a DOD program manager (Ewing, 1990). Fortunately, in DOD acquisition everybody is regarded as a customer, not only

contractors and defense organizations in the United States, but also those foreign entities that are united through international agreements or Foreign Military Sales (Ewing, 1990).

If given the opportunity, the customer may provide suitable advice on necessary modifications to current acquisition operating procedures. The attitudes of both the customer and the provider have a lot to do with the end result. With the development of the European Community, flexibility on the part of the United States will prove to be beneficial to DOD acquisition in the long run. These factors will be individually addressed in the next sections.

How Things Really Are. From a political standpoint, the development of the European Community may bring welcome relief to the United States. More U.S. time and energy could be devoted to other areas such as third world countries (Moening, 1990). From an economic standpoint, the decrease of the military threat in Western Europe will call for a decrease in the need for the services of the United States. Since most of the European Community countries are experiencing a decrease in their respective defense budgets, it is imperative that the U.S. make its defense programs as economical as it possibly can (Rector, 1990). However, financial factors are often not the most critical questions in program evaluation. Because of the European Community, other practical elements such as the completion of follow-on support, aspects of work compensation, and of economic trade-offs factors are becoming more important

(Heeze, 1990). Whatever the case, equanimity in the cost-sharing and burden-sharing aspects of multinational programs is an important factor in the politics of a successful program (Moening, 1990).

When dealing with European countries, in particular the NATO countries, the United States must realize that the Europeans want to be treated in exactly the same way that the U.S. treats its own defense organizations (Ewing, 1990). Because of the NATO alliance, European Community countries want the most favored relationship with the United States (Orsini, 1990). Other FMS countries do not make those kind of demands. As a rule, the Europeans fully resent being considered an FMS customer because they regard the NATO relationship as a closely held partnership (Ewing, 1990). A big factor is the problem dealing with the assignment of the Force Activity Designator (FAD). The FAD, together with the Urgency of Need Designator (UND), gives the overall priority rating to which a particular country is entitled. A FAD of 1 is given to military forces during wartime and possibly to strategic nuclear forces on alert status during peacetime. The United States normally gives the NATO allies, including Canada, a FAD 3 and the U.S. forces a FAD 2. The FAD of a NATO country may be temporarily upgraded if the country is in direct support of a specific U.S. military action. The NATO countries complain that their FAD's should be the same as those given the United States (Ewing, 1990). As will be discussed later, the lower FAD rating has occasionally resulted in decreased logistics support for the

European countries. As a result, it is necessary for the U.S. to deal in a different operational mode when dealing with a European customer rather than a typical FMS customer (Ewing, 1990).

In some cases, the United States finds that its European involvement is not FMS oriented. Because of the equal footing demanded by the NATO countries, defense-related dealings are different than similar dealings with other FMS countries. One example was in the NATO AWACS (Airborne Warning and Control System) program, a program in which 18 US/NATO Standard E3-A configurations were purchased as part of a cooperative program to upgrade the command and control of NATO's air defense forces (Young and Taylor, 1990:148). In this program, the U.S. forgave the 3 percent FMS surcharge across the board. While other FMS countries had to pay the surcharge, European countries did not. Similar waivers and rules changes were also provided to the Europeans on the F-16 fighter program (Ewing, 1990). One respondent stated that the criteria used to measure the success of such international programs should be the same used to measure the development of any program. The primary question centers on whether the program results actually meet the military need. In this regard, Orsini mentioned that the F-16 and NATO AWACS coproduction programs were basically measured from the determination of whether or not it was the same weapon system that had been previously produced in the United States (Orsini, 1990).

The success of the NATO AWACS and F-16 programs, according to one respondent, can be traced back to the development of a common definition of need. This common need is the most critical factor to the success of a cooperative program, but it is not easy to develop. The NATO countries often have trouble with the common definitions of need because the European countries have a different philosophy of war. Where the United States emphasizes mobility and speed, the European emphasis will be different because they do not have a similar worldwide defense commitment. Strides have been made in the right direction in the common definition of military requirements. For example, common use of 9 millimeter ammunition and the universal use of military fuels such as JP-8 has made logistics support more manageable. The bureaucracies of both the United States and Europe may provide barriers to the development of such common definitions. A closer look at areas that need to be changed will assist in mutual support.

Modification To Current Procedures. The steady flow of communication will help the U.S. understand the limitations and problems of their European partners. A better understanding will lead to a greater ability to help the European countries. One of the main problems the United States has is obtaining "cutting edge," detailed feedback from European countries. The U.S. program managers need to know the nature of the problem, what impact it is having, and how best the U.S. resources can help. Occasionally, the information needed by the U.S. may be considered defense security intelligence by the European

nation. The Europeans are sometimes hesitant to readily provide detailed figures on force strength, weapons inventory, and strategic defense plans to U.S. sources. In addition, since European industry is occasionally a competitor to U.S. industry, release of specific market or industry information may be considered detrimental to favorable European competition. Because much of the needed information is sensitive to some of the countries, the U.S. faces a constant challenge to get that information in a non-threatening way (Rector, 1990).

The threatening environment created with Foreign Military Sales requirements brings in a large set of other factors to be dealt with. Quite often European countries do not understand the strict guidelines associated with the FMS environment, the key point being that FMS must be accomplished at absolutely no cost to the U.S. government (Rector, 1990). In the NATO AWACS program, one of the things that specifically upset the Europeans was that all of the European countries had placed their program money in an interest bearing investment account. Two of the 13 participating countries, by regulation, could not make such an investment and set aside money in a non-interest bearing trust fund; one was Canada and the other was the United States. The NATO AWACS countries were able to fund most of the system upgrades from the interest that they had earned from their previous investments. The inability of the U.S. and Canada to do the same frustrated the Europeans (Ewing, 1990). Because NATO has a large number of individual air forces with

relatively smaller organizations, the rules are not as strict as they are in the United States. Such flexibility allows a greater chance for initiative with the European countries (Heeze, 1990).

One respondent stated that U.S. defense personnel sometimes like to hide behind the strict rules and regulations. Another respondent stated that the "over and above" situation is a good example. If a current contract requires some work over and above the terms and conditions of the contract, the U.S. requires specialized procedures for the contract administration activities to go through the new terms in nitty-gritty detail. The European approach to the same situation is that if the manager of the firm says that a project is going to take 100 hours, that figure is accepted (Orsini, 1990). The contract administration support that is required of the Europeans on cooperative programs is far above anything that they impose on themselves. With the administration of the NATO AWACS program, the German ministry that did the actual administration had to become quickly educated on the specific U.S. terms and conditions (Orsini, 1990).

Another issue dealing with the NATO AWACS program that frustrated the Europeans was the way in which the Force Activity Designator (FAD) was assigned. In the NATO AWACS program, the Europeans bought more spares per plane than did the United States. When the Europeans would send a spare (e.g. a black box) to be repaired, the box would go into a reparable pool. Because the U.S. had a higher FAD, when it came time for

a repaired black box, the pipeline was filled with NATO boxes which then went to support U.S. requirements. When the Europeans asked where their own support was, the U.S. response basically was that the Europeans bought into the U.S. logistics system and are therefore under the terms of the FAD priority measures. In this case, even though the Europeans were the principal funders of the black box pipeline, U.S. requirements were filled to the detriment of the European countries. This shows why it is extremely important to the Europeans to get the F-16 and NATO AWACS programs supported as much as they can by the European industrial establishment (Ewing, 1990). The strengthened industrial base of the European Community should provide greater opportunity for this to happen.

The European countries have internal bureaucratic problems to contend with themselves. On NATO standardization committees, literally years are spent trying to "get the words right" so that all participants can be in agreement (Lawrence, 1990). One respondent stated that the Germans are particularly difficult to deal with in this regard; they will take details down to the very end of a sentence in order to force things their way if necessary. Another problem deals with currency fluctuations. The unstableness of some European currency against the U.S. dollar may result in the program costing the European contractor or government more than was anticipated at program onset. By not having a fixed rate of exchange for the life of the contract, this will continue to be a problem (Orsini, 1990). The state-owned or highly leveraged European

business creates a particular problem in and of itself. One respondent noted that very seldom can a person be found that speaks for a particular company. To access that person and obtain a decision is extremely difficult. Once that person is located, there seems to be an inability for them to quickly decide whom they want to deal with in the United States. For example, if a company in the U.S. is the only supplier of a certain service and the country tell the U.S. that they do not want to deal with that particular contractor, it runs into problems (Rector, 1990). The bureaucracy may at times be overpowering, but to get such a large organization as NATO running well, a lot of rules are needed (Heeze, 1990).

Attitudes. The U.S. bureaucracy is tremendous in comparison to what the Europeans are used to. The U.S. tends to rely totally on pre-set rules and regulations. Even if the Europeans suggest a better, more practical way of doing the same task, they are told no. The U.S. is comfortable doing things the way they have always been done (Nostdal, 1990). The Europeans feel like they are equal with the United States because of the political openness that NATO has pushed for all along. Unfortunately, when dealing with the U.S. the Europeans often feel like they have been pushed down; with EC-92, the Europeans will undoubtedly push for more equality (Ewing, 1990).

One respondent noted that many U.S. government requirements and contracting personnel who deal with international programs tend to believe that the Europeans are

not as smart as the Americans. Americans tend to talk down to Europeans or incorrectly assume that European technical expertise or manufacturing processes were not as good as American knowledge and processes. As an example of how short-sighted such an attitude is, one respondent referred to a particular classified program in which Great Britain and the United States "parted company." The primary reason for the separation was that the U.S. saw Great Britain as a serious technology competitor. Even though there were works in the cooperative agreement alluding to technology sharing, it turned out to be more of a question of who was going to get the greater benefit. The U.S. saw themselves as not coming out pure winners and therefore, backed out of the program (Lawrence, 1990).

Many Europeans have seen American industries in operation, but the Europeans also know of the manufacturing and production capabilities that are in Europe; the Europeans are realistic about their potential. Too often Americans do not have similar knowledge of Europe, and underestimate the capabilities of European companies (Heeze, 1990). Recognizing that each of the countries do things a little differently, an increase in communication will achieve a greater understanding between European Community countries and the United States (Orsini, 1990). For example, there is a special relationship that the British feel they have with Americans, a relationship that is almost paternalistic. It is as if the Americans are still British, just on a different mass of land. This attitude goes

into British business dealings and other ventures; it is an attitude that Americans should take advantage of and build upon (Lawrence, 1990). One respondent noted that the misunderstanding between the U.S. and European countries force the Europeans to put off major program decisions until the very last moment in order to lever as much power, support, reduced costs, or whatever the perceived advantage to them is out of the situation. Consequently, decisions tend to come down to the wire. The contrived crises almost always get resolved. Such occurrences are especially evident when the lesser developed European countries (i.e. Greece, Turkey, Portugal) become involved. Political aspects often stand in the way of many business deals, but when things get really out of hand, defense ministers talk to each other or to the U.S. Secretary of Defense in order to exercise the appropriate amount of influence (Ewing, 1990).

Multinational partners need to be given a certain degree of equality. Unfortunately, the FMS arena is purely a client-salesman relationship which often fosters unhappy experiences about the FMS system (Heeze, 1990). One reason for this is that European industry has a sort of inferiority complex to the U.S. military industry. Not that European business is actually inferior, but the complex is founded mainly on the basis of size. U.S. industry has been rather self-sustaining on a national basis; however, any given European industry is not sustainable on a national basis alone. As one respondent

stated, the Europeans want to be full and equal partners, but they do not think that they can.

In the FMS arena, the gap is too wide between what the customer expects and what he gets; he has relatively little input into what he is getting and he only has to accept what the U.S. is sending. Perhaps if the U.S. would approach its FMS customer in a more considerate manner and allow the program to be steered with the customer, more satisfaction and better results would come for the Europeans. A little more realism and better attitudes from the Americans would do both the Americans and the Europeans a lot of good. Fair business processes need to be tried; if they are not, the reprisal from Europe may be revengeful (Heeze, 1990).

Industrial Competitiveness. As the attitude of Washington develops into a context of increased fairness, the American-made equipment currently in use in Europe will be steadily replaced by European-manufactured equipment. A prime example is the development of the European Fighter Aircraft (EFA). Business is steering Europe, and it must be remembered that these same businessmen are also the politicians. The result is that the European Community will cause more manufacturing and production to stay in Europe; European dependence on Washington will be substantially reduced (Heeze, 1990).

It will be very important for U.S. companies to forge stronger bonds with European companies. There is a great possibility that there will be more wide-spread "closing of the ranks" with European military programs; other nations simply

will not be allowed in (Lawrence, 1990). United States industries will have to work harder than before and use its marketing savvy to get into the European market. A willingness to be a partner in anything the Europeans ask for U.S. participation in is necessary. The U.S. needs an awakening similar to that being provided by the Japanese in the automotive industry (Ewing, 1990). U.S. industry suffered significantly at the hands of the Japanese until codevelopment ideas came along. The United States should not make the same mistake with the Europeans (Lawrence, 1990).

The United States has been on top industrially for quite some time. It will be difficult for this nation, that for 40-50 years has been number one in Gross National Product and in standard of living, to suddenly be forced to take a back seat. The development of the European Community may do just that. As European dependence on Washington's guidance and U.S. industrial expertise is lessened, the U.S. needs to increase its current levels of efficiency to remain competitive (Orsini, 1990). The U.S. has got to stress productivity and quality. Unless the current problems associated with these factors are solved, America is not going to have any products that people want to buy (Rector, 1990). Colonel John V. Orsini, Director of Contracting and Manufacturing, San Antonio Air Logistics Center, stated the following:

American business has stopped being hungry. Our industry has gotten lazy and complacent. As a result, we've often priced ourselves out of the market on some items. The European Community may cause U.S. defense industry to get hungry, trim the fat, and get competitive again. One of the smartest things that the defense industry could do is to find the corollary commercial items similar to those

manufactured in the defense industry that could be marketed successfully in the commercial market. (Orsini, 1990)

From a European defense industry standpoint, there is relatively little internal pressure from European government to buy American products. There are not many American aircraft vying for the next generation pilot trainer or the next generation fighter, with the exception of the F-16 (Orsini, 1990). In consideration of the trainer aircraft, the U.S. Air Force Air Training Command is seeing that now in their Joint Primary Aircraft Training System (JPATS) program. Under this program, the USAF is looking at European candidate aircraft as a replacement for the T-37 aircraft currently used in Undergraduate Pilot Training. Brigadier General W. John Soper, Deputy Chief of Staff for Logistics, Air Training Command, stated the following in relation to the JPATS program:

The Europeans are trying to get a feel for what it is that the United States wants. We recently had a contingent go over to Europe and visit with several of their competing companies. We were trying to find out how they were set up logistically in order to handle the JPATS program. They are concerned that they will not be as competitive as they would like to be given their current manufacturing capability and technology. They see the United States as a big market and they are trying to figure out what is the best way to break into it by being competitive. We find problems with some of their aircraft. One of the companies has designed and is flying an aircraft that is quite labor intensive because labor happens to be particularly cheap in this particular country. The United States says that we can't afford that particular airplane. The United States says that we need to have an aircraft that is not labor intensive, does not have a PDM cycle, or does not have an engine that needs to be pulled out and inspected every so often. If we had lots of hands available, that would be easy to do. So this puzzles the Europeans a little and they are forced to rethink the whole problem. What we're dealing with here is the fact that we've got two different cultures; one article that

may be competitive in one economy may not be competitive in another. (Soper, 1990)

The United States needs to understand what the Europeans are doing with their technology and manufacturing processes. Colonel Gene L. Rector, Chief of the Proven Aircraft Systems Division, Directorate of Materiel Management, San Antonio Air Logistics Center stated:

The United States better have representatives crawling all over those countries trying to find out what is going on, what is anticipated, and what is going to be needed. And then they need to gear up to do that particularly in terms of productivity and quality. (Rector, 1990)

The European Community has the potential to be the most powerful economic force in the world, and the United States may face a significant challenge in keeping up. But, the U.S. has identified its own problems, knows what they are, and is working on them (Soper, 1990). The integration in the United States is very strong. On this point, one respondent said, "I can never see France becoming a Texas and I can't see Germany becoming an Oklahoma." The same respondent stated that only if the Europeans are ready to transfer to a federalist basis will they ever develop as the United States has developed. The European Economic Community has been good at removing some of the barriers to trade; the United States should take advantage of that. The U.S. should encourage, foster, and use the European Community as a trading partner. As General Soper said, "It will be a real horserace between the United States, Japan, and Europe, but in the long run, it's going to benefit everybody" (Soper, 1990).

Market Factors

There are many factors driving the plans for European economic unification, the majority of which are driven by the marketplace. Nationalistic feelings need to be compromised for the common good. The economics of the situation will dictate that these national feelings will give way to the benefits of uniting: common productive capability, common buying power, and economic leverage (Rector, 1990). The thing that is going to unite Europe is common interests in the marketplace, with factors such as the development of a central European government or the implementation of a standard monetary currency playing less of a critical role as some would think (Soper, 1990). This section of the study will explore specific considerations related to European unification. A look at factors surrounding German reunification is also presented.

European Unification Considerations. European businesses and corporations are preparing joint deals and arrangements so that they will be able to work together after 1992 when the borders will be open. For the most part, the idea is catching on. As long as the individual countries want to be united, feel united, and act united then the rest of the good things about a common marketplace will follow. There will be some resistance to the process from local European parties, but this resistance will not be influential enough to totally cancel things from happening (Heeze, 1990). The strong ideals of nationalism within some local groups could provide the most significant resistance to the unification process. A

respondent stated that these ideals are compounded by a sense of history that is difficult for Americans to contemplate. Not only have some of these peoples been enemies for thousands of years, their memories are long. The Europeans can probably work through most of these types of problems. Nationalism may be a decisive factor because many of the nations, in particular France, want to be as free and independent as they possibly can. Regarding the deep nationalistic pride that many European countries exhibit, Ewing stated, "As things tend to blur those nationalistic ways of life, we're going to have problems" (Ewing, 1990).

A closer look within the European Community will show that some of these problems are current. The European Community is not the strong-bonded organization that the Brussels affairs personnel would have the U.S. believe. The French are the "old enemy" and to many, probably always will be. Many view the French as being rather unscrupulous in arms deals. The British have sort of an "island fortress" mentality and tend to view the "continentals" (land-locked European countries) with a marked degree of suspicion. For example, even though groups of continental European engineers are developing common measurements and technical standards, the British stand by and watch because they often do not want to get involved (Lawrence, 1990). One respondent stated that the British have made less than 20% of the preparations that the other European cousins have made for the European Community. Lawrence stated, "The

British recognize that in the future everyone will have to conform, but we [the British] will go in kicking and screaming" (Lawrence, 1990).

As the European market goes through its dynamic transition period, Europe will increase measures to separate itself further from Washington. This separation, however, will occur mainly as a result of a reduction in the military threat, not so much because of economic conditions. There will still be a strong economic tie between the U.S. and Europe for the simple reason that there is a strong historical tie between the U.S. and Europe. There are undeniable positive feelings among the Europeans being united in partnership and teamwork with the United States (Nostdal, 1990). Protectionism is going to happen to a degree with the Europeans, but they know that if they are going to make the EC the power that it is supposed to be, the protectionist ideals taken toward the United States must be lessened (Orsini, 1990).

There are many unanswered questions regarding the role that the United States should play in the European unification process. The U.S. will be granted formal observer status in the Community Council only if the Europeans feel that such a privilege is in Europe's best interest. Occasionally the U.S. has lobbied for a more influential position in the European Community political process, however, the Europeans tend not to be very interested in U.S. involvement in policy decisions regarding the independence of the European Community (Ewing, 1990). The possibility of allowing a European representative

in a comparable position within the U.S. Congress has been discussed, but it would be very difficult to come out with a positive balance to the reciprocal influence a U.S. member would hold in the EC Council (Heeze, 1990). The fact that the United States is a member of NATO, that U.S. troops will be stationed in Europe for the foreseeable future, and that many U.S. corporations are already represented in Europe, there will probably always be some sort of semi-formal U.S. representation in European politics (Soper, 1990). One respondent said that the U.S. should probably not be a voting member within the EC Council, but the U.S. should be represented because of the economic, military, and political ties between the U.S. and Western Europe. The United States should be prepared for the future inclusion of some, if not all, of the Warsaw Pact countries in the European Community. This would present a whole new set of market considerations to be dealt with; the impact on DOD contractors would be compounded because the Warsaw Pact represents a greater technical expertise and a lot more natural resources (Orsini, 1990). The bottom line with EC market development is that the hopes and dreams of a free society are not going to result in immediate solutions to higher quality of life issues. A lot of hopes and ambitions are not going to be satisfied right away as some are expecting. European unification purports to be something bordering on chaos. There is the real possibility of a lot of unfulfilled dreams (Rector, 1990).

Concerns Over German Reunification. One of the biggest anxieties with European unification is the reunification of East and West Germany. There is great concern or an ingrained fear among a few nations about the imbalance to the EC that German reunification may have (Orsini, 1990). By and large, many Europeans are still distrustful of Germany. One respondent stated that the long memories of two world wars often places economic considerations on the back-burner. However, if speaking strictly about economics, a united Germany can only have a positive effect on the European Community (Ewing, 1990).

German reunification may be very beneficial, but it will definitely have a significant impact on the Community. A united Germany is going to have to allay the fears of certain countries that were involved in World War II, especially if Germany would decide to take back property that it lost as a result of the wars. However, given that Germany has gone through the process of two world wars, has had over 40 years of success as a democratic country (West Germany), and that there is great potential through EC-92 for Germany to be further tied to its neighbors, a united Germany can only be beneficial to all of Europe. The threat from Germany, which will continue to be the "big kid on the block," will be economic, not military (Soper, 1990).

Economically speaking, German reunification could not come at a better time because West Germany has done well with its economic growth and world power status, but they are also

starting to feel some effects on their economy. Some of the West Germans have felt that some of the available work was beneath their dignity to do. Over the past 5-10 years, West Germany has imported almost 5 million Turks to do the kind of labor that the Germans would not do, but the rules have changed. The Germans recognize that they need a developed labor force and that there is a large untapped resource in East Germany (Orsini, 1990). Even though East Germany is advanced compared to most of the Eastern bloc countries, it is still widely deficient when compared to West Germany, especially for consumer goods (Rector, 1990). East Germany also offers the foundation of a lot of poorly run manufacturing plants that could greatly benefit from West German expertise and power (Orsini, 1990). The industrial capability of a unified Germany would be extraordinary. Orsini stated:

Within 5 years, a united Germany will provide a force that will provide a tremendous market for the other countries in the European Community. It also represents a tremendous manufacturing capability that could dominate the market. (Orsini, 1990)

The reunification of Germany may in fact slow down the European Community process. A delay in the opening of the borders may not occur, but the German reunification process may cause a relatively long period of uneasiness among European people (Heeze, 1990). Lawrence said, "At the end of the day, German reunification can only be positive. In the short term, the whole situation frightens me because it's so unstable!" (Lawrence, 1990). Without German unification however, the negative effect of two Germanies may draw down the

infrastructure of the European Community. East Germany and West Germany should become one family of Germans in order to offer a workable, cohesive whole to the EC effort (Moening, 1990).

The EC effort is to unify. More Europeans are beginning to feel very proud about becoming "Europeans," but as has been mentioned, German reunification has the potential to slow down that positive feeling process. Heeze stated, "To get to a strong and healthy, united Europe, the people have to feel European. Being from one state or the other is not important, but the size of Germany and the long memories of some Europeans make many uneasy" (Heeze, 1990).

Issues Surrounding Technology Transfer

The posture taken by many U.S. businesses on technology transfer is extremely protectionist. There are certain American companies and corporations that do not like to lose control of their technologies; therefore, as one respondent noted, the main reason for transferring technology across international borders is when the transfer is forced in the name of national defense. U.S. companies are very sensitive to giving the European industry the potential to develop a competitive edge.

Recognizing that technological ties between the United States and Europe lie in the defense industrial base, the transfer of technology is critically important (Heeze, 1990). There seems to be a push towards Europeans wanting to better protect their technological information because the U.S. has so

strongly protected technological information on previous programs (Nostdal, 1990). Often methods, plans, and procedures on how to repair a certain weapon system component are not given to the customer country in an FMS arrangement because of U.S. fear of technology transfer. It would therefore not be surprising to find that as the European Community grows stronger, it will "play the same game back" on the United States (Heeze, 1990). One respondent stated that restrictions on European technology transfer would come as a reaction to the United States' restrictions, rather than self-imposed. The ultimate goal may be to drive the U.S. out of the lead in aircraft production. Greater sharing of technology within the European Community may develop into a protectionist shield against the United States. The Europeans may welcome anything that the U.S. has to give, but reciprocal sharing may not be as forthcoming (Rector, 1990).

Inter-European technology transfer will keep a closer-held rein on information that the Europeans feel is valuable. This protectionism may increase if Eastern European countries press forward with their own independence (Nostdal, 1990). As the European Community grows and financial capital is increased, the Europeans may tend to demand a better return on information being considered for technology transfer (Orsini, 1990). The Europeans are generally very pragmatic people. If they have something which gives them the ability to exploit technology, and is also something that they can sell outside the European Community, they are going to market it. However, the main

thing to realize is that the Europeans are going to try to stay within (Ewing, 1990).

Possibilities For NATO

The defense goals of the United States probably have not changed dramatically, if at all, as a result of EC-92. However, the recent occurrences in Eastern Europe and throughout the world may have an effect on defense, specifically European defense. The question of NATO's part in the scheme of things is important. If a reunited Germany does not become a part of NATO, that could spell the end for the NATO Alliance. Next to the United States and Canada, Germany is the major contributor to NATO (Ewing, 1990). At least, recognizing the increased power represented by a unified Europe under the plans of the EC, it will naturally follow that the "NATO role" of the individual European countries will tend to increase proportionately, thus relieving the U.S. of some of its current NATO role (Moening, 1990). Relief would come in the form of less defense capital outlays. The EC does have plans for the development of some type of mutual defense system for the Member States; depending on how large a role the EC is going to play in European defense, the U.S. may be forced to do substantial restructuring (Orsini, 1990). A respondent stated that NATO has helped to provide a basis for the European Community to grow, thus it seems fitting that as Europe goes through its unification process, it should help support NATO.

NATO should not be dissolved, but its concept has to be adapted to the new situations in Europe (Heeze, 1990). The

positive economic relationships between the European countries will not evoke an atmosphere conducive to war (Soper, 1990). However, because some Europeans feel that a few of the Eastern European countries got their freedom too fast, at least for the near future, NATO should be kept as a military alliance (Nostdal, 1990). The potential for tactical military conflict still exists, but not necessarily with the Soviets. A mutual defense alliance with a strong NATO military force should be ready (Orsini, 1990) Soper stated, "Probably in a perfect world, we should dissolve NATO, but we're never going to be in a perfect world" (Soper, 1990).

If NATO should cease to exist as a military power, it should continue to exist as more of a politically unifying organization. The possibility of a "United States of Europe" is low because of the many cultural and political differences of the members. A central government would need to be established, a thought that does not appeal to the nationalistic Europeans who want to maintain their own independence. However, a loose confederation that could tie the countries together could exist; NATO could provide the framework for such an organization (Soper, 1990). Since the U.S. is the largest part of NATO, this would guarantee continued U.S. presence in European affairs. When the military requirements dwindle, the troops could be replaced with civilians who would strengthen the political role (Heeze, 1990). This restructured NATO organization would be able to solve common problems as well as political, economic, and

military issues. .It is conceivable that NATO's influence as a political entity could spread to other parts of the world (Rector, 1990).

Summary

This chapter combined the responses to the questions posed to the interviewees during the primary data collection process. The interview guide is located in Appendix A of this study. The conclusions presented in the final chapter will be based in large part on information gathered in the personal interviews.

IV. Conclusions and Recommendations

Chapter Overview

The U.S. defense acquisition environment is facing an important challenge with the coming of European Community 1992. Not only are the European industries quickly organizing into entities which will fit within the overall EC plan, other strong industrial nations such as the United States and Japan are gearing up for the effect on their own international programs. In the United States, the significant impact of a declining defense budget tends to overshadow other potential economic threats; however, the impact which may be caused by the European Community should not be ignored.

This chapter provides conclusions and recommends measures the U.S. should consider. The integrative model, developed from analysis of the primary and secondary data, is also part of this chapter.

Conclusions of the Study

1. From an economic standpoint, the European Community has the potential to significantly decrease the United States defense market. The goals of European economic integration will most likely occur. At this point, the combined industrial and marketing strengths of the individual Member States could support at least one major aerospace manufacturer capable of competing head-on with U.S. companies such as McDonnell-Douglas, Boeing, or Northrop. Even if the threat-reducing events

occurring in Eastern Europe were to subside, future European Community progress suggests that the currently dominant U.S. arms market will be challenged by a European controlled market. American-made equipment now in use in Europe will be steadily replaced by European manufactured items.

2. The United States "customer" relationship with European business needs to be transformed into more of a partnership.

Europeans by and large feel a strong sense of closeness to their United States partners. With the development of European Community 1992, Europeans are demanding more equality on the multinational programs which are being developed or are currently in progress. The United States must come to grips with the actual capabilities of their European partners, some of which are quickly narrowing the competitive advantage of the U.S. defense market. The development of true partner relationships will allow the U.S. to remain a viable trading partner with the European Community. Continued emphasis on cooperative programs, joint ventures, and codevelopment programs will be invaluable to the U.S. in promoting these relationships.

3. Financial factors are no longer the critical determinant in international programs; the Europeans prefer other types of compensation. The European Community has the potential for a Gross National Product almost equal to, or even greater than, that of the United States. The less-established Member States will reap the benefits of the Community's financial power. The stronger the foothold gained by the

Europeans in the worldwide defense market, the more likely they will be to expect offsets, technology transfer, and other compensation from their business relationships. The United States can expect the European Community to become "choosy" with its decisions concerning international programs. These programs, to have any chance at success, will have to provide even greater benefits to the Community than before.

4. There will most likely be a "closing of the ranks" with defense-related programs in the European Community; it is critical that the United States get in now. European businesses, as part of their preparation for the opening of the borders in 1992, are energetically preparing joint deals and working relationships with each other. It is very possible that one of their motives is to phase out American business from the European market. The United States, rather than relying on its normal short-term European business relationships, needs to make important headway in building long-term business relationships with European firms. This will help to insure a U.S. economic presence in the European Community.

5. United States defense industry should become more open with its technology. The United States has much to offer the Europeans in the form of technology, and most importantly many Europeans are aware of this. Even though the European Community fervor breeds among the Europeans a "we can do it by ourselves" attitude, European business is aware that the use of American technology will promote European industrial

advancement much more quickly than if the technology were not available. The demand for American technology gives the U.S. an effective negotiating tool for trade-offs with the Europeans that should assure continued U.S. participation in European Community business.

Another view which frequently ran through the interviews was that the United States defense industry should protect its technology from the Europeans as much as possible. United States industry has historically been reluctant to transfer developing technology to foreign companies. In some cases, defense program requirements were the only reasons that the technology was released. As European companies move closer towards the goals of 1992, it can be expected that there will be a tendency to closely hold any developing European technology. The Europeans will gladly take any technology that the U.S. provides, but the sharing of European technology with the United States is not likely. Whether or not this area of European protectionism is to be considered a sort of revenge upon the U.S. for historical technology restrictions may be subject to debate. Proponents of this view contend that the U.S. must realize that the potential for increased inter-EC technology transfer may come at the expense of U.S./European technology transfer. Furthermore, the European Community will have the capability to produce technology that could be readily used by the United States; readily used, but unavailable.

Given these opposing views on handling technology transfer, it seems prudent, with the current push for

multinational cooperation among defense programs, that U.S. defense industry be more open with their technology. Not that reasonable caution should be thrown aside; however, the European Community has the potential to give the global industrial base a tremendous upward push. It would be a shame if the U.S. defense industry, because of self-imposed isolationism with technology, would effectively remove itself from this forward momentum.

6. The United States needs to understand what the Europeans are doing with their manufacturing processes and technology. As the Europeans come together in economic unity, new manufacturing processes will be found and current processes will be enhanced. Along with these developments will come the advent of new technology. The United States cannot afford to idly watch the Europeans move toward a position of potential economic superiority. United States industry should have representatives in the European nations keeping a close eye on industrial developments. In the past, the Europeans eagerly watched and tried to enhance their own industry from the examples set by the Americans; now it may be time for the Americans to watch and learn from the Europeans.

7. The United States has identified its own problems in defense industrial competitiveness. Most importantly, the U.S. is working on them. Complacency in the global defense market can only lead to the weakening of whatever position has previously been obtained. In the commercial sector, the Japanese took advantage of a non-aggressive U.S. automobile

industry, and the U.S. may take years to recover. The United States knows how to market its goods; however, the quality and productivity associated with the manufacture of these goods needs improvement. There needs to be a greater sharing of technology and processes in the United States between the defense industrial establishment and commercial enterprises. The increased transition of technology and processes into and out of the commercial and defense industrial sectors will undoubtedly strengthen overall industrial competitiveness.

8. The reunification of Germany may have a negative effect on European politics, but the economic ramifications upon the European Community will be positive. The long memories of many Europeans with the events of World Wars I and II will place significant political strain on the development of the European Community. A unified Germany represents a very powerful political figure which could potentially dominate Western European politics and economics. On the economic side, the combination of West German industrial experience and East German resources represents a power that could individually compete with any market in the world. The driving force behind a united Germany will add tremendous economic impetus to European Community 1992.

Other than strictly from a NATO interest, the United States should probably step back and avoid the tendency to manipulate the German reunification process. Even though the U.S. was heavily involved in the World Wars, U.S geographical separation would make any U.S. manipulation of Germany appear

out of line to the neighboring European countries. German reunification represents a culmination of history which most Americans could not comprehend; it is best left in European hands. However, once Germany is unified, the question of its acceptance and future role in the NATO Alliance suggests direct U.S. involvement.

For many of the same reasons that some of the European Community countries insist on going through the European unification process without U.S. involvement, so do they desire the same for German reunification. Once Europe accepts a reunified Germany, the stronger European Community and NATO Alliance (assuming that Germany is a member) should assure that the economic and political effects for the United States will be positive.

9. NATO's military role is not finished, but its evolution into a more political alliance will serve both European and United States interests. The thawing of the Cold War is reason enough for many to consider dissolving the NATO alliance, but if glasnost and perestroika breakdown, tensions could be rekindled to a state much hotter than before. U.S. military troop reductions in Europe should be cautiously tapered as the world waits for the next Eastern European move. Because all of the EC nations, with the exception of Ireland, are members of NATO, a synergistic relationship between NATO and the EC would provide an ideal format for the cross-flow of information. As NATO develops into a political alliance, the role of the United States may have to be down-played to ward off any possible

European resentment; however, the continued existence of NATO will at least give the U.S. a presence as an observer in European Community affairs.

A Conceptual Model

The model in Figure 9 is an author-developed graphical representation of the factors influencing both Europe and the United States as both await the results of European Community 1992. The model integrates the primary and secondary research into specific relational concepts connected in diagram form, thus hopefully giving a clear picture of what this study was about.

Figure 9 addresses barriers, positive factors, and projected end results of European Community development in relation to the DOD acquisition environment. The European Community's basic charter is to identify and effectively remove all barriers to free trade in the defense and commercial environments. The major barriers are identified in Figure 9. Positive ideals, procedures and influences already in place or under development which will aid in this barrier removal are also shown. NATO is presented in this same context as an existing entity that could be utilized to foster communication and commonality between the United States and the European Community. Policy or process changes in international acquisition should consider the potential positive and negative ramifications of the issues appearing in the model. Finally, after the details of the imposing barriers and positive influences are worked out, the results of the unification

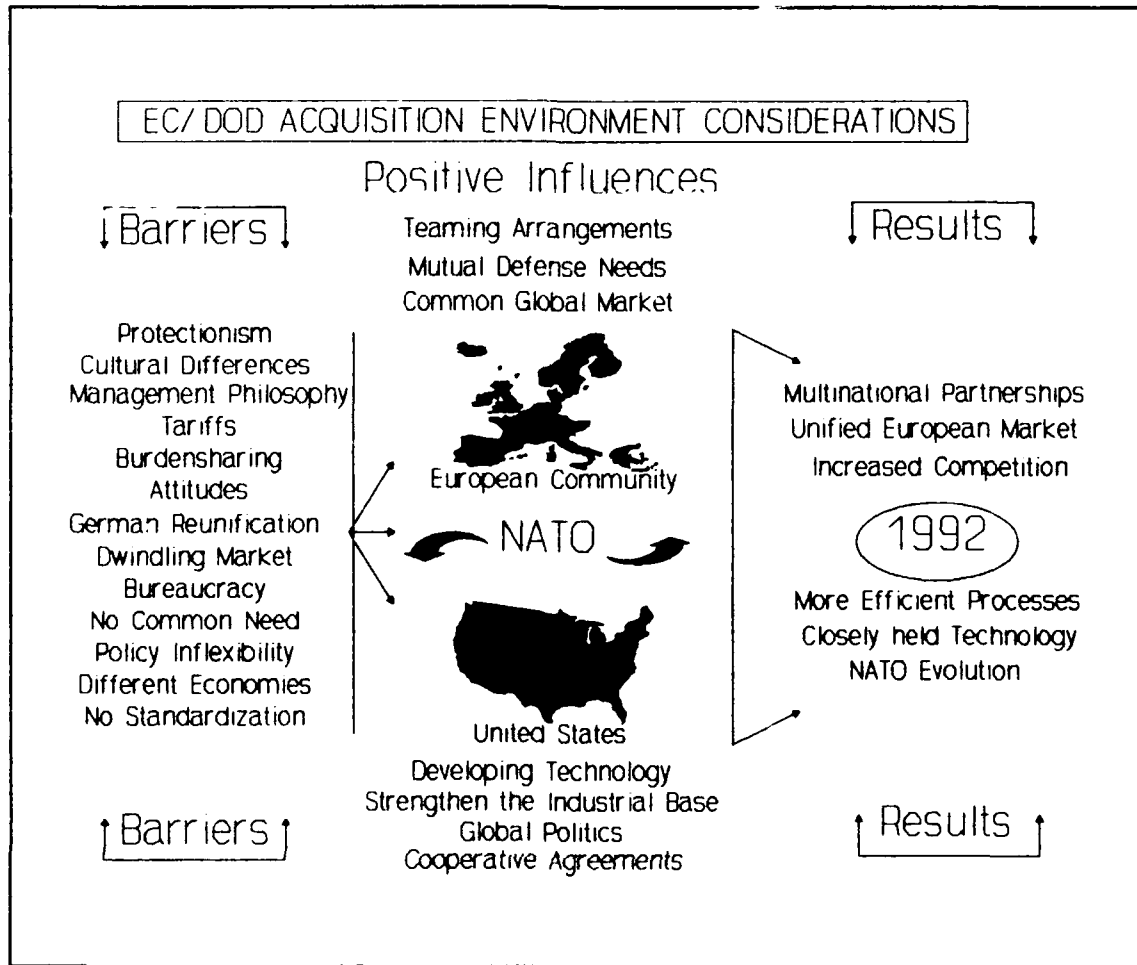


Figure 9. Final Integrative Model

process should lead to the issues presented in the final portion of Figure 9.

Suggestions For Further Research

This study hopefully may be used as a springboard for additional research concerning defense acquisition relative to European Community 1992. The author suggests the following four areas for consideration: the effect of EC-92 upon Canada, a closer look at the effect of German reunification upon the EC, an examination of centralized versus decentralized

acquisition processes, and a statistical analysis of the opinions of DOD contractors concerning EC-92.

The first suggestion, the effect of European Community 1992 upon Canada, could be tied in with Canada's plans for its own future in NATO. In the past, the United States, before making its own decision, has occasionally waited to see Canada's view on a NATO-related subject. The relationship between Canada, the United States, the European Community, and NATO is worthy of further research.

The second subject refers to the effect of German reunification upon the European Community. German reunification plans are evolving so quickly that any passage of time, no matter how short, will yield changes in European politics and economics worthy of investigation.

Another area worthy of investigation is the benefits and disadvantages of centralized versus decentralized acquisition processes. The House of Representatives report, A Review of Defense Acquisition in France and Great Britain (listed in the bibliography), provides one view on the subject. The differences in the two systems sometimes cause controversy among United States and European defense businesses.

The final suggestion for further research, a statistical analysis of the opinions of DOD contractors, may involve the completion of a survey to obtain the primary data. A suggested survey, prepared by the author, is located at Appendix B. Slight modification to the survey may also render it usable for data collection from European contractors.

It is important that research continue in the areas of international and multinational acquisition. If this study has improved the understanding of just one small segment of the acquisition arena, then it has been successful.

Appendix A: Interview Guide

What criteria do you use to evaluate the success of an international program with NATO countries? Do you foresee these criteria changing as a result of the European Community?

What factors are most important in contributing to a successful international program between NATO countries and the United States?

In your past dealings with European business, do the problems tend to stem from the European bureaucracy, economy, managerial philosophy, etc., or do the problems tend to stem from U.S. sources?

The literature points to deficiencies in air traffic control, lack of a standard monetary system, and the protectionist fears of France, Italy, Spain and England as impediments to smooth EC development. What problems do you feel Europe will have in its unification process?

Do you feel that the U.S. may have altered its present defense goals or requirements as a result of the potential establishment of the European Community? How?

It has been stated that Europe may stop all technology transfer out of the European Community (as well as rejecting technology transfer from the outside). Do you envision an increase more intra-continent technology transfer or a closer-held "inter-EC" transfer of developing technology?

What are the most difficult (or frustrating) acquisition issues and barriers that NATO countries encounter in dealing with the United States?

How significant do you feel the reunification of Germany would be to the European Community development process and do you feel German reunification will have a positive or negative impact on the Community?

Do you feel that the industrial competitiveness of U.S. defense contractors will be weakened by the European Community?

How do you feel the reduction of European dependence on Washington will effect the U.S. political, military, and economic environment?

Do you feel that the United States should be represented within the decision making body of the European Community council?

Do you feel that NATO should be dissolved?

In your opinion, how should the United States prepare for the European Economic Community?

Appendix B: Proposed Contractor Survey

1. How have the following concerns affected business relations between your organization and European businesses:

Geographical Separation

1	2	3	4	5
---	---	---	---	---

Not at
All

Occasional
Concern

Major
Concern

Cultural Differences

1	2	3	4	5
---	---	---	---	---

Not at
all

Occasional
Concern

Major
Concern

Language Barriers

1	2	3	4	5
---	---	---	---	---

Not at
all

Occasional
Concern

Major
Concern

Different Technological Capacity

1	2	3	4	5
---	---	---	---	---

Not at
all

Occasional
Concern

Major
Concern

Managerial Practices

1	2	3	4	5
---	---	---	---	---

Not at
all

Occasional
Concern

Major
Concern

Tariff and Trade Restrictions

1	2	3	4	5
---	---	---	---	---

Not at
all

Occasional
Concern

Major
Concern

Political
or Economic
Policies

1	2	3	4	5
Not at all		Occasional Concern		Major Concern

2. In your dealings with European businesspersons, please rate the following (in consideration of the persons with which you normally have discussions):

Individual
Decision
Authority

1	2	3	4	5
Very Little		Occasional Approval Required		Full Decision Authority

Timely
Decisions

1	2	3	4	5
Slow		Occasional Delays		Fast

Status
Within the
Company

1	2	3	4	5
Non-Management		Middle Management		Upper Management

3. Is the European business generally able to identify project problems (schedule constraints, material concerns, manufacturing hurdles, etc) or does your company often find itself involved in the foreign partner's problem solving?

Your firm's
Involvement

1	2	3	4	5
Rarely Involved		Sometimes Involved		Frequently Involved

4. After discussions with European business, does your company more often find itself reacting more to problems the European company is facing or to problems that your company is facing?

1	2	3	4	5
European Company Problems		Balanced Between the Two		Own Company Problems

5. What is the approximate dollar value of your largest project with European business (over the last five years)?

1	2	3	4	5
Less than \$10K	\$10K - \$100K	\$100K - \$500K	\$500K - \$1M	More than \$1M

6. What is the estimated total dollar value of all your projects with European business (over the last five years)?

1	2	3	4	5
Less than \$100K	\$100K - \$1M	\$1M - \$10M	\$10M - \$50M	More than \$50M

7. To what extent did strong political pressure (either U.S. or foreign) force decisions that were unappealing to either your organization or the European business?

1	2	3	4	5
Never an Influence		Moderate Influence		Frequent Occurrences

8. How great are (were) the technical risks associated with the business you conducted with European companies?

1	2	3	4	5
Low Technical Risks		Moderate Technical Risks		High Technical Risks

9. How agreeable was the European business in releasing new technology to your company?

1	2	3	4	5
Did Not Want To		Cautious but Willing		Very Agreeable

10. Was there any transfer of technology or unique manufacturing procedures that occurred as a result of your business with European companies?

1	2	3	4	5
No Technology Transfer		Moderate Amount		Large Amount

11. To the best of your knowledge, did any of the European businesses feel that they were "exploited" technologically?

1	2	3	4	5
No Exploitation		Possible Exploitation		Definitely Exploited

12. To the best of your knowledge, do you feel that your business was "exploited" technologically by European business?

1	2	3	4	5
No Exploitation		Possible Exploitation		Definitely Exploited

13. If U.S. national or corporate interests conflict with the best interests of your joint European project, does your company orient more toward successful completion of the project or toward national interests?

1	2	3	4	5
National Interests		Balance of the Two		Successful Project Completion

14. If European national or corporate interests conflict with the best interests of your joint European project, does the European business orient more toward successful completion of the project or toward national interests?

1	2	3	4	5
National Interests		Balance of the Two		Successful Project Completion

15. Which of the following characteristics do you look for in a European business partner (circle choices)?

Financial backing

Prior similar experience

High Technology

Large workforce

Has other U.S.
business

Other _____

16. If a formal agreement should exist between a U.S. business and an European business, do you feel that it would be better to have a treaty under U.S. law or individual executive agreements?

1	2	3	4	5
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Executive
Agreements

Combination
of the Two

U.S.
Treaty

17. In resolving business disputes between U.S. and European business, what method do you feel will prove more beneficial? (Circle one only)

International arbitration --- U.S. Court system

18. In your opinion, should formal legal arrangements between U.S. and European business be avoided as much as possible?

1	2	3	4	5
---	---	---	---	---

Not Very
Important

Somewhat
Important

Vitally
Important

19. Which one of the following factors do you feel is most important in contributing to a successful international program between Europe and the U.S. (circle one only)?

Clear definition of need

Equal cost burden-sharing

Promise for follow-on business

Transfer of new technology

20. In your past dealing with European business, do the problems tend to stem from the European bureaucracy, economy, managerial philosophy, etc., or do the problems tend to stem from U.S. sources?

1	2	3	4	5
European		Both Europe and the U.S.		United States

21. Do you feel that the United States should view the potential establishment of the European Community as an opportunity or a threat to U.S. defense goals?

1	2	3	4	5
Threat		Neither Opportunity or Threat		Opportunity

22. Do you feel that the reunification of Germany (should it happen) will be an opportunity or a threat to European Community development as a whole?

1	2	3	4	5
Threat		Neither Opportunity or Threat		Opportunity

23. Do you feel that the development of the European Community will be an opportunity or a threat to U.S. defense contractors?

1	2	3	4	5
Threat		Neither Opportunity or Threat		Opportunity

24. Do you feel that the United States should be represented within the decision making body of the European Community council?

1	2	3	4	5
Strongly Disagree		Neither Agree or Disagree		Strongly Agree

25. With the development of the European Community and its potential effect on the United States militarily, economically, and politically, do you feel that NATO should be dissolved?

1	2	3	4	5
Strongly Disagree		Neither Agree or Disagree		Strongly Agree

26. How important do you believe it is for U.S. companies to develop a conscious strategy for responding to the development of the European Community?

1	2	3	4	5
Not Very Important		May Be a Good Idea		Vitally Important

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