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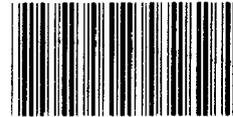
BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

No Easy Choice: NATO Collaboration And The U.S. Arms Export Control Issue

To date, the administration has been willing to make some compromises on third country sales of weapon systems made from U.S. technology to achieve NATO collaboration on standardization of weapons. These compromises have had both positive and negative effects.



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If arms transfer concessions are to be made for the sake of collaboration, the Congress, with its legislative endorsement of both policies, may want to expand its prerogatives in establishing where the line on making concessions should be drawn. At the same time, GAO recognizes that the administration needs flexibility to negotiate international agreements. For these reasons, GAO proposes a range of legislative alternatives.



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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

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To the President of the Senate and the
Speaker of the House of Representatives

This is an unclassified version of our issued report, "No Easy Choice--NATO Collaboration and the U.S. Arms Export Control Issue," C-ID-80-43, dated August 26, 1980. It discusses the conflict between U.S. policy of controlling exports of military equipment containing U.S. technology and the desire to increase development and production agreements with North Atlantic Treaty Organization allies. The report analyzes the impact U.S. export control policy is having on collaboration and the willingness of the executive branch to modify this policy to increase the amount of collaboration taking place.

We are sending copies of this report to the Director, Office of Management and Budget; and the Secretaries of State and Defense.

James A. Stacks
Comptroller General
of the United States

D I G E S T

The United States has a conflict between its desire for increased NATO collaboration to standardize weapons and the need to maintain control over weapons systems made from U.S. technology. These two policies may not be able to co-exist if the United States is to move forward in standardization. So far the administration has been willing to compromise to some extent on third country sales to achieve cooperation. These compromises may well be worth making. On the other hand, they may allow foreign producers using U.S. technology to sell to countries the United States opposes for political and foreign policy reasons or they may prohibit the United States from selling to its usual customers. This may be one of the prices for cooperation.

The conflict is a real one. (It is a product of the new importance of exports to the major European producers; different foreign policies and arms sales exporting patterns) of the United States, United Kingdom (UK), France, and the Federal Republic of Germany (FRG); (the inability of the UK, France, and FRG producers to compete with the United States; and new methods of collaboration now being tried). For all major producers, exports fill both foreign policy and economic goals. Because transfer of weapons adds to the military capability of the recipient, all the producers treat arms exports as reflections of their foreign policies, and all look to exports to create economic benefits--to lower the unit costs of national purchases, to earn foreign exchange, and to solidify economic relations with the recipients.

MANIFESTATIONS OF THE CONFLICT

To delineate the extent of the conflict between the two policies--NATO collaboration and control of exported U.S. military technology--GAO analyzed the trading patterns of the major producers and did case studies of

ongoing collaborative weapons projects at both the production and development stage. GAO found major differences in the customers considered acceptable by the different producers, particularly between the United States and France, which explains French reluctance to accept U.S. restrictions in collaborative projects.] (See ch. 2.)

GAO then assessed the competitiveness of European producers who get a license to produce U.S. systems to determine if they would be willing to accept restrictive U.S. export controls. Because of smaller quantitative requirements and less efficient production practices, the UK, France and FRG generally cannot compete with the United States in markets. Thus, they are reluctant to adopt U.S. systems. This limits the potential for NATO collaboration using dual production. (See ch. 3.)

GAO also reviewed the handling of third country sales in new co-development programs. It found diminishing U.S. controls for the sake of cooperation with the largest concessions extracted where the potential standardization benefits and European contributions are the greatest. In one case where U.S. technology was produced for a European firm, the State Department exceeded its own policy guidelines which required that sales territories be confined to NATO. In another, the Department of Defense is proposing an export version where noncritical U.S. technology can be exported without controls over future recipients.

A threshold approach was used in another project where a participant's ability to veto export sales is based on its technology contribution. This approach fails to distinguish between critical and non-critical technology, and also does not identify or define future recipients. Finally, in a cooperative feasibility agreement as well as in other advanced co-development projects, the executive branch put off the decisions on controlling future exports, waiting for the production phase before addressing the issue. (See ch. 4.)

LIMITED CONGRESSIONAL PREROGATIVES

To reach agreements, the United States has modified U.S. sales policy for the sake of collaboration. Despite the importance of these policy decisions, congressional participation is limited because authorization legislation covering arms exports is not designed to deal with the new forms of collaboration. These decisions may require a departure from U.S. sales policy and set the rules governing arms transfers to be made in the next decade or beyond. If arms transfer concessions are to be made for the sake of standardization, the Congress, with its legislative endorsement of both policies, may want to expand its prerogatives in establishing where the line on making concessions should be drawn.

At the same time, GAO recognizes that the administration needs flexibility to negotiate international agreements. For these reasons, GAO proposes a range of legislative alternatives, some of which would enhance the congressional role and may limit administrative prerogative and another which would also give the administration greater negotiating flexibility. Given the importance of the policy tradeoffs, however, the Congress may wish to participate in the reconciliation of the two foreign policies now in conflict. (See ch. 5.)

Under present law, the Congress has disapproval rights over third country transfers of systems made with U.S. technology if U.S. Government foreign military sales channels are used. For commercial licensing transactions, however, the present law provides no explicit guidance to the State Department in establishing what the United States considers acceptable sales territories for foreign producers using U.S. technology in their systems. There is no congressional right to disapprove the transfer of technology through commercial licensing and most, if not all, technology is likely to be transferred through these channels. If the State Department chose to, it could define a sales territory to include the entire non-Communist world and could sanction any export

of U.S. critical and noncritical technology. Or, the State Department could deny foreign producers the right to export any systems made with U.S. technology. The Congress is informed of but has no right of disapproval over commercial licensing agreements and therefore does not rule on the appropriateness of sales territories proposed by companies in export licenses and approved by the State Department.

This inconsistency in the current law enabled the administration to enter into government-to-government agreements based on the threshold concept. The law currently allows the administration to make agreements allowing open-ended transfers of U.S. technology because it is anticipated that the agreements will be implemented using commercial channels.

Although the Congress will receive a certification on threshold and export version types of agreements, it can not disapprove these agreements. Congressional ability to act as a check is limited because the legislation is not designed to deal with the new forms of collaboration. The Congress will be consulted but cannot disapprove the agreement or any future agreement allowing less restricted transfers of U.S. technology. (See ch. 5.)

WAYS TO UPGRADE CONGRESSIONAL PREROGATIVES

Because committees of the Congress have recently expressed concern over the transfer of U.S. technology embedded in collaboratively developed projects, the Congress may want to consider the following actions:

1. Amend the Arms Export Control Act (AECA) to require that all government-to-government collaborative agreements be submitted to the Congress and include a provision explicitly defining the third country sales prerogatives of the participants. This would ensure that co-development agreements are submitted to the Congress, and that rules on future exports are established before the stakes in collaboration were raised. DOD could not then put off

the third country sales' issue until the production stage. [An early decision on handling future sales would be required, and the Congress would be made aware of all early efforts at collaboration.]

2. [Give the Congress a right of disapproval over all sales territories beyond NATO for all government-to-government agreements whether implementation is through foreign military sales or commercial channels.] Third party transfers through commercial channels could be put under the same controls with the same congressional right of disapproval. This could be done by including commercial transfers in section 3(a) and (d), AECA. This would have stopped the threshold agreement because individual recipients of U.S. technology would have to be identified and transfers could not be made to countries to which the United States would not sell. [Congressional decisionmaking prerogatives would have been expanded. (This option was partially implemented by December 1980 legislation.) (See p. 70.)]
3. [Put all government-to-government agreements, under the same controls as Foreign Military Sales, even if agreements are to be implemented commercially but add a new mechanism to allow transfer of technology without identifying the recipient.] The Congress could give the administration the authority to transfer noncritical technology but could require that the Secretary of Defense submit to the Congress the criteria for deciding what was noncritical technology for review and/or disapproval. This would allow for an export version but not for a threshold agreement. (This option was partially implemented by December 1980 legislation.) (See p. 70.)
4. [The Congress could require that the administration submit certifications on transfers of technology for NATO collaborative projects where the recipient is not identified.] The certification could include information on

- the type of technology;
- its contribution to the system's capability;
- the technology's availability from other sources;
- the impact of a denial on the collaborative project; and
- prospective customers.

This certification could be subject to either congressional review and/or a 30 or 60 day right of disapproval. The Congress could determine on a system-by-system basis whether the type of transfer was appropriate without the recipient being identified. The Congress would have a one-time review right over the individual system. Both threshold and export version types of agreements would be possible unless the Congress disapproved. This would require modifications of current law governing third-country transfers to establish separate criteria for NATO collaborative projects. More importantly, it would establish one set of rules governing these third country transfers.

While the Congress would gain a right of disapproval over all technology transfers in collaborative projects (commercial as well as foreign military sales), the executive branch would have the option of making more broadly structured agreements on exports sales in NATO collaborative programs. The nature of the agreement, rather than the implementation method, would determine congressional and executive review rights.

5. The Congress could couple these increased controls with a new negotiating tool to give the Secretary of Defense greater flexibility in handling the third country sales issue while retaining U.S. controls. The tool proposed is a right to share third country markets including foreign military

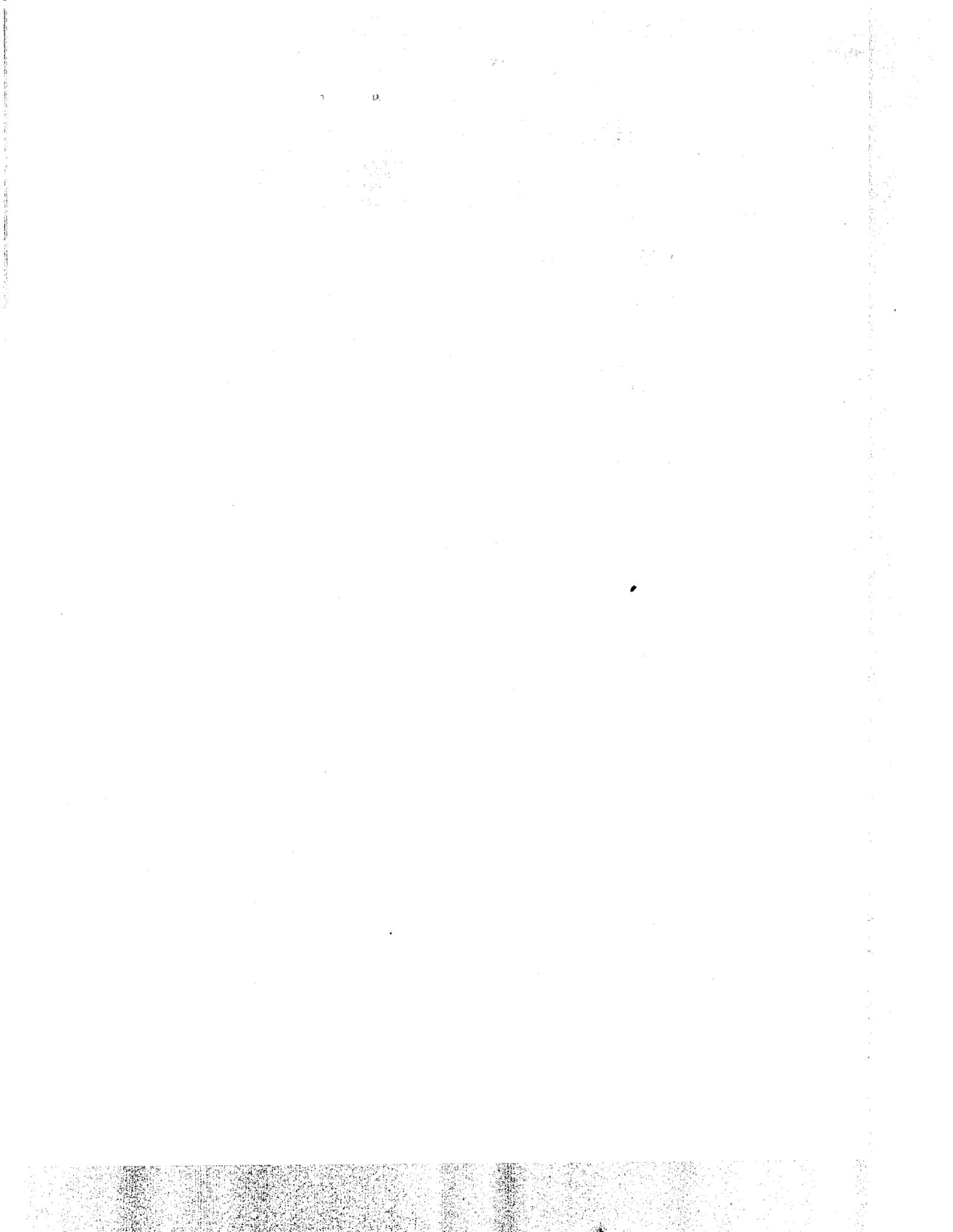
sales transactions with European participants. This would require changes in section 42 of AECA which prohibits procurement for foreign military sales outside the United States if there are adverse effects on the U.S. economy or industrial base.

AGENCY COMMENTS

Both the Departments of State and Defense considered GAO's description of the policy conflict between fostering NATO arms collaboration and controlling third country transfers generally accurate. However, they did not believe additional congressional controls were justified; in their view more controls would reduce executive branch flexibility in negotiations of collaborative projects and would not harmonize the conflict in the policies. (See ch. 6 and app. II.)

While the proposed alternatives put forth by GAO may partially reduce executive branch flexibility, GAO believes consideration of these alternatives is appropriate because:

- The existing level of executive branch flexibility creates uncertainty as to where the line will be drawn on further relaxation of U.S. controls over technology for the sake of collaboration.
- The Congress has endorsed both policies and may want to participate in the reconciliation of these policies now in conflict.
- There is a need to establish one set of rules governing the transfer of technology in collaborative projects based on the importance of the agreement rather than on the method of implementation which currently sets both the extent of congressional prerogative and executive branch flexibility.
- Executive branch consultation, at best, is uneven.



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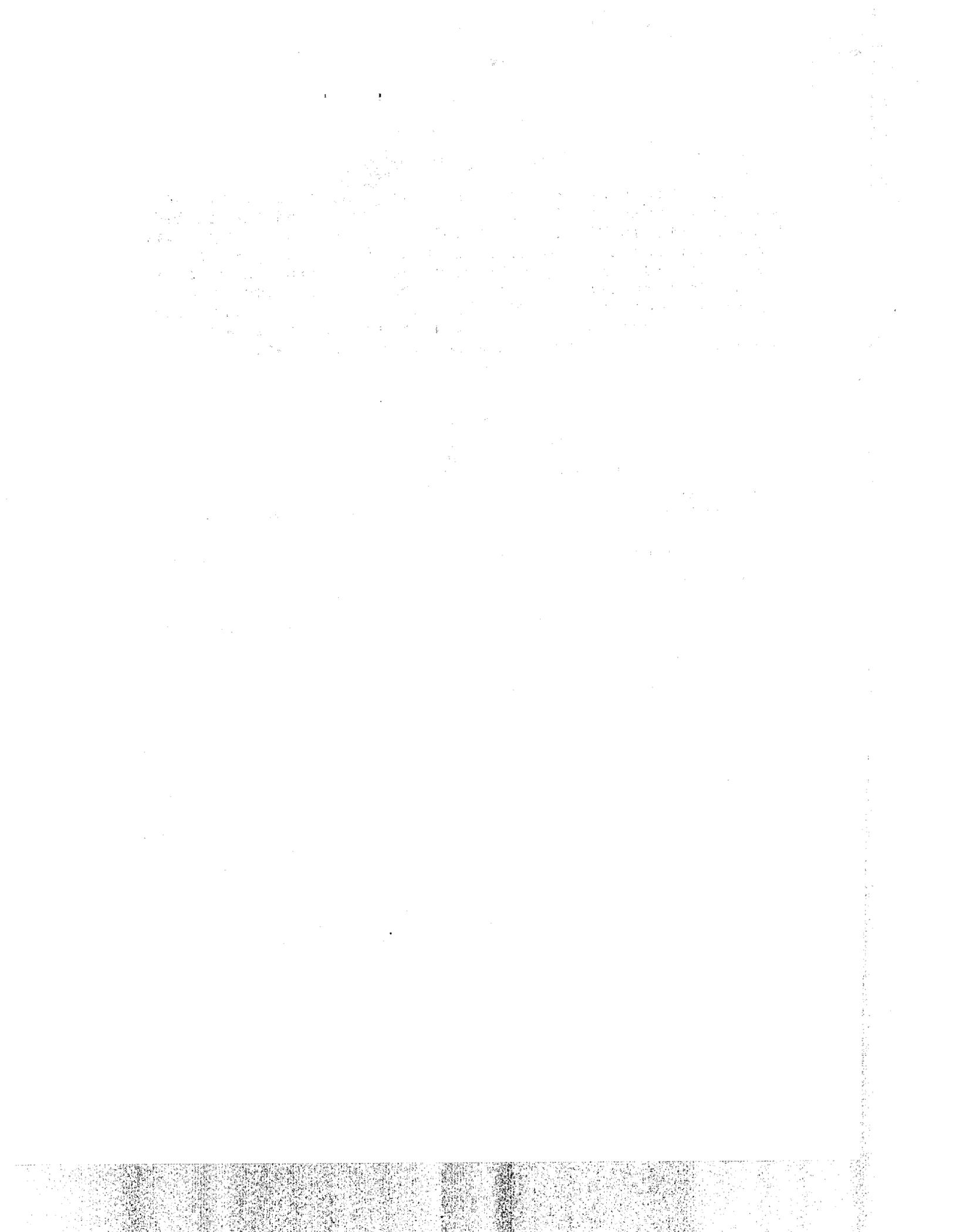
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ABBREVIATIONS

AECA	Arms Export Control Act
AMRAAM	Advanced Medium-Range Air-to-Air Missile
ASRAAM	Advanced Short-Range Air-to-Air Missile
DOD	Department of Defense
ERMISS	Explosion Resistant Multi-Influence Sweep System
FMS	Foreign Military Sales
FRG	Federal Republic of Germany
IEPG	Independent European Program Group
ITAR	International Traffic in Arms Regulation
LDC	Less Developed Country
MLRS	Multiple Launch Rocket System
MODFLIR	Modular Forward-Looking Infra-Red
MOU	Memorandum of Understanding
NATO	North Atlantic Treaty Organization
OPEC	Organization of Petroleum Exporting Countries
R&D	Research and Development
UK	United Kingdom
U.S.	United States



CHAPTER 1

IMPORTANCE OF EXPORTS

How important are exports to the United States, the Federal Republic of Germany (FRG), France, and the United Kingdom (UK) in NATO? Since 1971, exports have jumped from about 15 percent of total defense equipment output to an average of 30 percent, reflecting the new importance of the Middle East market after the Organization of Petroleum Exporting Countries (OPEC) oil increases. (See Chart I.) All four producers are growing increasingly dependent on exports. The figures are remarkably similar.

CHART I

Export Dependency Trend
1971-1977
(in billions of 1976 constant dollars)

<u>Country/Export and Dependency</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
France							
Value of Arms Exports	\$.2	\$ 1.0	\$ 1.1	\$.8	\$.7	\$.9	\$ 1.2
Export Dependency Ratio (percent of defense production) (note a)	N/A	23	25	21	20	24	30
U.K.							
Value of Arms Exports	.3	.6	.8	.6	.5	.7	.8
Export Dependency Ratio (note a)	15	24	25	27	21	25	27
FRG							
Value of Arms Exports	.2	.4	.2	.2	.4	.7	.8
Export Dependency Ratio (note a)	15	24	14	16	27	30	34
U.S.							
Value of Arms Exports	4.7	5.5	6.2	5.3	5.0	5.9	6.5
Export Dependency Ratio (note a)	17	19	25	23	23	27	29

a/ Defense production is computed by equipment procurement budget, plus exports, less imports. Exports are then divided by defense production to get the dependency ratio.

Since 1975, available data shows exports have constituted a fifth or more of the total defense output for all the major western producers and the trend is clearly up. The volume of exports, therefore, has a significant impact on national weapons production affecting cost, scheduling, and investment decisions.

The dramatic increase in export orders in the 1973 to 1977 period will further increase dependency on exports. Compared to the 1954 to 1972 period, U.S. and UK export orders increased over tenfold and French and FRG orders fivefold in the 1973 to 1977 period on an average annual basis. The FRG has emerged to become a major arms exporter, no longer having a negative balance of trade. The backlog of orders has also shot up in that 5-year period as the chart below shows.

CHART II

BACKLOG OF ORDERS
(In billions of constant 1976 \$)

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
U.S.	\$ 2.3	\$ 8.9	\$18.8	\$26.1	\$30.6
UK	.5	.7	1.6	2.8	4.0
FRG	.4	1.0	1.7	1.9	2.1
FRANCE	N/A	1.3	2.9	2.7	4.8

In 1977, the U.S. backlog was double the size of its equipment budget of \$16.3 billion. The French backlog is double and the UK almost 1-1/3 times their 1977 equipment budgets, while the FRG's backlog is about equal to its equipment budget. Even given the Iranian and Egyptian cancellations, these enormous backlogs suggest that exports will account for a still larger proportion of defense production in the coming years.

This new importance of exports has exacerbated the problem of reaching a common policy on handling exports in collaborative projects because the stakes are now so high. Equally important is the difference in trading patterns among these countries. Unlike the 1954 to 1974 period, when there was considerable intra-European trade in military equipment, most exports now go to non-NATO countries, and each of the major producers sell to different nations (see ch. 2). Therefore, they are no longer willing to accept the U.S. restrictions on exports that have traditionally accompanied all U.S. transfers of technology for production overseas. At the same time, the new push for standardization requires resolution of this issue

if collaboration is to be successful. The Carter administration looks to collaboration to increase the efficiency of Alliance military expenditures, to ease the burden of defense budgetary claims, and to challenge effectively the high Soviet defense spending of the last decade.

Designed to focus new attention on NATO conventional force needs neglected during the Vietnam War, the Presidential commitment to "promote a genuine two-way transatlantic trade in defense equipment" also recognized the new strength of European defense industries. Although weapons standardization has been an Alliance goal since NATO's inception, the need has increased as European nations replaced their early postwar U.S. defense purchases with equipment produced by their revived defense industries. The number of competitive, nationally developed systems proliferated as France, the UK and the FRG produced and purchased new generations of nationally or European developed systems.

Faced with ever-higher costs to develop new weapons, the three largest European producers first collaborated on new systems in the late 1950s. A decade later, over a dozen major systems were being developed and produced jointly (see Chart III on the following page).

France spearheaded many of these projects,

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The 1976 creation of the Independent European Program Group (IEPG) provided France with a non-NATO forum to exchange views on European defense cooperation. For the FRG, collaboration became an attractive alternative to direct purchases from the other major producers, the United States, UK, and France, enabling the FRG to rebuild its defense industry in a low-profile fashion. Collaboration not only split development costs for all partners but also allowed the European producers to build up their domestic defense industries and keep defense jobs at home. Although the major producers--France, UK, and the FRG--develop and purchase the bulk of their defense equipment nationally, collaborative projects now make up between 10 and 15 percent of the French and UK procurement budgets and 50 percent of the FRG equipment budget.

Higher defense development and personnel costs have put pressure on the defense equipment budgets of all NATO nations, including the United States. For effective transatlantic collaboration, the United States needs methods which would attract the participation of the UK, France and FRG for only in that way could significant amounts of defense dollars be saved. As

CHART III

INTRA-EUROPEAN COLLABORATIVE PROGRAMS

<u>Name of System</u> <u>Date Development Began</u>	<u>FRANCE</u>	<u>UK</u>	<u>FRG</u>	<u>ITALY</u>
<u>Aircraft</u>				
Transall transport (1959)	X		X	
Atlantic maritime patrol (1959)	X		X	
Jaguar strike/trainer (1965)	X	X		
Tornado Multi-role combat aircraft (1969)		X	X	X
Alpha jet trainer (1970)	X		X	
<u>Helicopters</u>				
Puma medium transport (1967)	X	X		
Lynx general purpose (1967)	X	X		
Gazelle light (1967)	X	X		
<u>Missiles</u>				
Martel air-to-surface (1964)	X	X		
MILAN man-portable anti- tank (1965)	X		X	
HOT wire-guided anti-tank (1965)	X		X	
Roland ground-to-air guided (1965)	X		X	
Otomat anti-ship missile (1969)	X			X
Anti-surface ship missile II (1975)	X	X	X	X
<u>Artillery</u>				
FH-70 155mm towed gun (1968)		X	X	X
SP-70 self-propelled 155mm gun (1973)		X	X	X

Chart IV below shows, France, the UK, and FRG spend three-quarters of all NATO-Europe defense equipment expenditures and 96 percent of all research and development (R&D) funds. Their participation is essential if duplication is to be avoided at the development stage or if common systems are to be produced for the Alliance.

CHART IV
SUMMARY OF 1977 DEFENSE EXPENDITURES
OF EUROPEAN ALLIES

(in constant 1976 billions of U.S. dollars)

<u>First-tier Countries</u>	<u>Total Defense Budget</u>		<u>Equipment Budget</u>		<u>Research and Development Budget</u>	
	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>
Federal Republic of Germany	\$15.5	28	\$1.9	20	\$.6	18
France	14.0	26	2.8	24	1.3	38
United Kingdom	10.8	20	2.3	30	1.4	40
	<u>40.3</u>	<u>74</u>	<u>7.0</u>	<u>74</u>	<u>3.3</u>	<u>96</u>
<u>Second-tier Countries</u>						
Belgium	2.4	4	.3	3	--	--
Denmark	1.1	2	.2	2	--	--
Italy	4.6	8	.7	8	.1	3
Luxembourg	.3	1	.1	1	--	--
Netherlands	3.7	7	.8	8	.03	1
Norway	1.2	2	.2	2	.01	--
Portugal	.9	2	.2	2	--	--
Turkey	N/A	N/A	N/A	N/A	N/A	N/A
Greece	N/A	N/A	N/A	N/A	N/A	N/A
	<u>\$14.2</u>	<u>26</u>	<u>\$2.5</u>	<u>26</u>	<u>\$.14</u>	<u>4</u>
	<u>\$54.5</u>	<u>100</u>	<u>\$9.5</u>	<u>100</u>	<u>\$3.44</u>	<u>100</u>

Unlike earlier U.S. offers which generally involved only the smaller NATO nations as subcontractors, the latest U.S. effort is designed to bring in the UK, France, and FRG, assuming they will in turn include other European nations. To implement this transatlantic cooperation, the U.S. Department of Defense has adopted three methods. As a gesture of U.S. goodwill and in hopes of opening up defense trade, the United States has signed general procurement memorandums of understanding (MOUs) which mutually waive "Buy National" provisions applying to defense purchases. These bilateral agreements, made with 10 NATO allies, are supposed to open defense contracts to foreign competition.

Recognizing the strength of domestic pressures to keep defense jobs at home, the second method promoted by the United States is licensing of U.S.-developed systems for production in Europe. This dual production--with complete facilities on both sides of the Atlantic--is designed to allow the Europeans to take advantage of U.S. technological investments while keeping defense jobs at home. The United States offered 17 U.S. systems for dual production to the IEPG in the spring of 1979, and has also adopted one European-developed system. To save development funds, however, the UK, France and FRG or the United States must agree to give up any ongoing comparable development efforts, and U.S. success in this effort has been limited so far (see ch. 3).

The third leg of the triad, the "family of weapons" approach, calls for cooperation at the development stage by allocating development responsibility for complementary systems. Through early collaboration, the United States hopes to get maximum Alliance-wide benefits from development spending. Negotiations on one family of air-to-air missiles was recently completed and negotiations on anti-tank missiles are underway. The current plan calls for U.S. development of the medium-range air-to-air missile and European development of the short-range missile. Dual production is projected to follow the U.S. or European consortium development of each system. The economic, political, and legal problems associated with third-country sales in this new form of collaboration are discussed in chapter 4.

SCOPE AND METHODOLOGY

To show the extent of the third country sales problem, we analyzed the arms sales trading patterns of the major producers and did case studies of ongoing collaborative weapons projects at both the production and development stage.

Using data collected by the Defense Intelligence Agency on arms sales agreements in the last 24 years, we compared the regional distribution of U.S., UK, French, and German markets in the 1954 to 1972 period with the 1973 to 1978 period. This showed the market changes affecting all four producers. We compared the U.S. and European markets to show the extent of differences in customers considered acceptable. Based on U.S. sales practices, foreign policy goals and legislative prohibitions, we identified with the assistance of State Department officials 16 nations as countries to whom the United States would not sell arms. We took a conservative approach by placing only those countries where the United States would not sell any military equipment in the "excluded" category. We then examined French, UK and FRG sales in this category to see the types of items involved. This analysis gave us an indication of how likely it would be for the European producers to accept U.S. limitations on arms sales in collaborative projects.

We then selected critical cases of collaborative production of U.S.-developed systems to determine the readiness of European producers to accept U.S. imposed restrictions on exports and the willingness of the U.S. Government to modify its policy of open competition for third country sales markets. We selected three systems where the U.S. and European producers compete for exports--the AIM-9L air-to-air missile, MODFLIR night vision system and the Stinger man-portable air defense system. We assessed the competitiveness of European producers of U.S. designed systems to project European willingness to accept U.S. restrictions. We used interviews with service-level weapon system coordinators to identify production plans of the United States and the Europeans, reviewed reports by government contractors on the potential for reaching economies of scale in collaboration, and submitted questionnaires to industry on specific weapon systems to determine other factors affecting competitiveness.

We reviewed two systems where the United States was willing to share rather than compete in the export market. In these cases, the Multiple-Launch Rocket System (MLRS) and the M-735 anti-tank ammunition system, export sharing provided a way to compensate European producers for markets foregone while the United States retained the rights to define the acceptable markets.

To explore the ramifications of third country sales problems on the new family of weapons approach where both the United States and the Europeans participate in development

efforts, we examined three somewhat analogous joint development projects--the ATLAS laser designator system, the Roland ground-to-air defense system and the ERMIS minesweeping system. These case studies were used to determine how U.S. sales policy is being modified where the Europeans contribute significantly to the development. We then examined the air-to-air missile family-of-weapons agreements to define the extent of concessions made by the United States to its traditional policy of strict controls over future exports of systems containing U.S. technology.

Finally, we analyzed the U.S. laws applying to third country sales made through government and commercial channels to see how the congressional role differed. We then compared both the export rules adopted and congressional involvement in collaborative agreements implemented through commercial as opposed to Foreign Military Sales (FMS) channels.

Our overall analysis led us to propose a series of legislative alternatives which would generally increase congressional involvement in the decisionmaking process. These proposals were discussed with appropriate congressional committees.

CHAPTER 2

TRADING PATTERNS POINT TO THE CONFLICT BETWEEN

U.S. SALES POLICY AND U.S. NATO COLLABORATION

The extent of the potential conflict between U.S. and European collaborative programs and U.S. sales policy can be identified through an analysis of the sales policies and trading patterns of potential partners. With the FRG, UK, and France collectively spending three-fourths of total European resources allocated to major acquisition programs, our analysis concentrates on these countries.

To highlight recent changes in arms sales trading patterns, we contrasted sales agreements in 1954 to 1972 with the more recent, 1973 to 1978 period. The United States, UK, France, and the FRG decide which countries to sell arms based on their different individual definitions of national interest. The first section shows the chief changes in British, French, and German markets in the two periods. The second section categorizes sales as "acceptable" or "excludable" from a U.S. policy perspective as a device to measure how large the differences are between U.S., UK, French, and FRG policies. The extent of the differences gives a good indication of whether collaboration with mutually acceptable export rules is possible. Recognizing that each nation has different foreign policies, this section does not attempt to judge individual policies.

To outline the extent of the conflict, the next section compares U.S. and European policies and practices, emphasizing the type and rationale behind European sales.

Our analysis showed the following common trends for the United States, U.K., France and FRG:

- new export orders increased dramatically in the 1973 to 1978 period;
- the importance of the European market declined as the Middle East became the predominant market; and
- sales policy rhetoric is similar among these nations as are the economic concerns--increasing production runs, lowering unit costs, recovering R&D, and earning foreign exchange.

Among the major European producers, the following conclusions about the extent of their differences with U.S. policy can be made:

- French sales practices are so different from the United States that without significant compromise, wide-scale collaboration appears extremely doubtful;
- although 41 percent of FRG sales were to countries to which the United States would not sell, the FRG is viewing collaboration as more important; and
- UK sales policies and practices closely resemble U.S. sales patterns with 75 percent of UK agreements made with customers who also buy from the United States. Important exceptions, however, point to potential problems.

EXPORT TRENDS

In the 1973 to 1977 period, the United States and the FRG increased their annual rate of new export orders by over tenfold. This solidified the U.S. position as the leading free world exporter, increasing its share of the free world market from 50 to 71 percent. At the same time, the FRG emerged as a major exporter with exports almost equal to the UK. Annual average French and UK export orders jumped fivefold, retaining their position as the 2nd and 3rd largest free world exporters. This shows the increased importance of exports to all major producers.

As Chart V shows, the importance of the European market to all suppliers decreased. This decline resulted primarily from the FRG move to collaborate in defense production and thereby build up its own defense industry rather than buy military equipment off-the-shelf. At the same time, when the FRG made direct purchases, U.S. rather than French and UK equipment was preferred in the 1970s. The French and UK also lost in the smaller European market to both the United States and the FRG. The FRG made inroads in this market by offering offset and licensing arrangements.

In the 1970s, the Middle East became the most important market for all suppliers. For example, two thirds or more of new arms agreements made by France, the United States and UK, and about 40 percent of FRG agreements were made with Middle Eastern countries. In the earlier period, the Middle Eastern market accounted for only 25 percent of all sales

agreements. A product of the new wealth of the OPEC nations, and the rearming after the 1973 War, this new Middle East market has become the crux of the third country sales problem as shown in the chart on the following page.

The new role of Germany:
a smaller European market

The FRG's emergence as a producer and competitor affected the European market in several ways. From the 1950s to the early 1970s, the FRG was France's and UK's major European customer, making \$2.4 billion in agreements, a \$131 million annual average. By the 1970s, FRG agreements with France and the UK fell precipitously to \$185 million, a \$37 million annual average, one-fourth of the earlier volume, and still less in real terms. Dissatisfied with direct purchases, the FRG insisted on full partnership with the UK and France through joint ventures. Moreover, for its remaining direct purchases, the FRG moved to the United States, making \$1.8 billion worth of new agreements between 1973 and 1978, a \$360 million annual average, seven times greater than the earlier period.

The loss of the German market almost eliminated France as a serious factor in the European market. During the second period, for example, four-fifths of France's \$1 billion in European agreements were made with Greece and a non-NATO member, Spain. Most Greek sales occurred in early 1974 and consisted of missile patrol boats, Mirage fighter aircraft, and tanks. The most significant Spanish sales involved Mirage fighter aircraft.

The FRG not only stopped buying from France, but also began to capture part of the smaller NATO market through offsets and licensing arrangements. FRG breakthroughs included:

- \$170.5 million for self-propelled anti-aircraft weapon systems sold to Belgium;
- \$180 million for Leopard I tanks and self-propelled, armored air defense artillery guns and other items sold to the Netherlands;
- \$87.6 million in Leopard I tanks to Denmark;
- \$110 million in submarines to Greece;
- \$90 million in sales of 12 classes of patrol boats to Spain (only 2 of 12 to be built in the FRG).

CHART V
REGIONAL DISTRIBUTION OF ARMS AGREEMENTS 1954 to mid-1978 (note a)

(in millions of dollars)

REGION	FRANCE				FEDERAL REPUBLIC OF GERMANY				UNITED KINGDOM				UNITED STATES			
	1954 through 1972	Percent of total	1973 to 1978	Percent of total	1954 through 1972	Percent of total	1973 to 1978	Percent of total	1954 through 1972	Percent of total	1973 to 1978	Percent of total	1954 through 1972	Percent of total	1973 to 1978	Percent of total
Europe/Canada	\$2,634	40	\$ 1,014	10	\$ 997	51	\$1,624	28	\$1,712	26	\$ 650	8	\$ 9,018	53	\$11,462	17
Middle East	1,436	22	6,881	68	330	17	2,330	41	1,505	23	6,245	75	4,599	27	47,500	71
Latin America	545	8	799	8	299	16	1,129	20	944	14	209	3	1,514	9	1,276	2
Asia & Pacific	826	13	697	7	196	10	337	6	1,671	26	577	7	1,906	11	5,977	9
Africa South of the Sahara	1,056	16	504	5	119	6	302	5	517	8	293	3	27	-	604	1
Communist	60	1	181	2	8	-	9	-	195	3	352	4	-	-	-	-
	<u>\$6,557</u>	<u>100</u>	<u>\$10,076</u>	<u>100</u>	<u>\$1,949</u>	<u>100</u>	<u>\$5,731</u>	<u>100</u>	<u>\$6,544</u>	<u>100</u>	<u>\$8,326</u>	<u>100</u>	<u>\$17,064</u>	<u>100</u>	<u>\$66,839</u>	<u>100</u>

a/ Statistics are based on agreements negotiated from 1954 to 1978. Figures are not adjusted for changes in orders, like the cancellations after the overthrow of the Shah and Egyptian cancellations following loss of Saudi Arabian financial support.

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More recent deals, not included in the chart, involved a multi-billion dollar offset arrangement with Belgium and the Netherlands for coproduction of the Leopard II tank.

Sales to the FRG accounted for half of all UK agreements with European nations or Canada in the first period, but only one-tenth of these sales in the second. In the 1973 to 1978 period, UK sales within Europe have been predominantly with the smaller NATO nations, but these did not make up for the loss of direct sales to the FRG. Moreover, some of the second-tier European countries moved from the UK to the United States and the FRG for weapons. For example, while once the sole supplier of arms to Norway, the UK supplied only 5 percent of Norwegian needs in 1978. Major recent UK customers in Europe include Finland (\$246 million) and the Netherlands (\$167 million).

The Middle East market:
New opportunities

While the European market was shrinking for France and the UK, the Middle East market expanded and soon towered in importance over other markets. For France and the UK, Middle East agreements accounted for over two-thirds of all export agreements in the 1973 to 1978 period, a threefold increase from the earlier period. New French markets included Egypt, Iran, Iraq, Morocco, Saudi Arabia, and Syria. In product terms, major sales of Mirage fighter aircraft and/or the Crotale surface-to-air missiles were made to these countries. These French aerospace sales were made to countries prohibited to U.S. fighter aircraft manufacturers. On the other hand, the Crotale missile was sold to both friends and foes of United States foreign policy. This suggests that the French are more competitive in ground armaments than in aerospace.

The UK was also successful in winning a major Middle Eastern market, which made up 75 percent of the UK's new agreements. Iran, Saudi Arabia, and Egypt accounted for 86 percent of these sales. Other smaller UK customers in the Middle East and North Africa included Kuwait, Oman, the United Arab Emirates, Syria, Libya, and Iraq. The UK met the challenge of competition from the United States and France by agreeing to build up the indigenous defense production base of Middle Eastern countries and by making a number of barter and offset arrangements. For example, the UK agreed to (1) license the production of the Swingfire anti-tank gun and the Lynx helicopter to an Arab consortium and (2) barter weapons.

(including Chieftain and Shir tanks, Rapier missiles and support ships) for oil with Iran. The UK was also awarded a major Saudi deal worth over \$1.2 billion to build runways, taxiways, roads, hangars, radar sites, missile sites, schools, hospitals, shops, and clubs. Although the deal is unlikely to lead to the sale of UK aircraft since the Saudis are purchasing American aircraft, it illustrates UK success in competing with the United States for a portion of the lucrative Middle East market. The UK also has a reputation of being very competitive with the United States in ground armaments.

FRG agreements with the Middle East now make up 40 about percent of their total market, a more than twofold increase from the earlier period. These agreements were made with a large number of Arab states, including Iran, Saudi Arabia, Syria, and Iraq. Major FRG sales deals include licensing arrangements for the production of ammunition and rockets, as well as sales of submarines and patrol vessels.

The rest of the third world market

For both France and the UK, the non-OPEC Third World market became less important as their Middle East market burgeoned. On the other hand, FRG sales to these less developed countries (LDCs) continued to account for one-third of their total market, while regional significance of these U.S. sales declined moderately from 20 to 12 percent.

The FRG increased their sales to Latin America, rivaling the United States in dollar amounts. Their sales consisted primarily of licensing arrangements and sales of various classes of naval vessels. French sales to the region continued to make up 8 percent of France's total market, consisting primarily of Mirage fighter aircraft sales to Peru, Argentina, and Ecuador, as well as light frigates for Argentina, British-French Jaguar fighter aircraft and tanks for Ecuador and guided missile boats for Peru.

In the Asian region, the three major suppliers continued to supply Pakistan and India, but the importance of that market declined in relative terms. The FRG made one important sale to Pakistan and France made several major recent sales in the region--\$150 million for Indian purchases and coproduction of the MATRA 550 air-to-air missile; \$170 million for military truck production facilities; and \$140 million for submarines. The African market became relatively less important for France and the UK due to the honoring of the United Nations (U.N.) embargo of South Africa.

Unlike the FRG, the relative importance of the non-OPEC Third World market declined for France and the UK. For them, as for the United States, the Middle East market overshadowed all others. In contrast, FRG markets were split among Europe and Latin America as well as the Middle East. The single most important shift in the relative role of different regional European markets is the new importance of the Middle East.

Using a U.S. sales policy perspective, the next section measures the extent of difference between U.S. and European sales practices. European sales to countries where the United States could not sell because of legislative prohibition or policy differences are placed in the "excluded" market category whereas sales to countries where the United States would probably sell are placed in the "acceptable" category. The section assumes that if the Europeans exported items which included U.S. technology to the "excluded" market, the United States would object to the sale. Excluded sales are examined in detail.

DIFFERENCES IN ARMS SALES RECIPIENTS BETWEEN THE UNITED STATES AND EUROPE

Based on U.S. sales practices, foreign policy goals, and legislative prohibitions, 16 nations were placed in the excluded market. For example, the Congress imposed embargoes on Turkey, Pakistan, and India in the 1970s. The 1973 Cyprus conflict triggered a congressional prohibition of all U.S. arms sales to Turkey. Similarly, the 1971 India-Pakistan confrontation led the Congress to embargo U.S. sales to both sides. Although the Turkish embargo was lifted in 1979 and the administration recently offered weapons to Pakistan and India following the Soviet invasion of Afghanistan, these events occurred after the 1978 cutoff point adopted in this study. These kinds of changes in U.S. sales policy only highlight the problem of accepting a multilateral forum for determining exports.

Differences with the United States over Middle East policy and legislative prohibitions against selling to certain countries combined to exclude U.S. arms sales to Iraq, Libya, Syria, and Algeria. Because of its opposition to U.S. Middle East policy in the 1973-78 period, Egypt was placed in the excludable market. 1/ U.S. policies prohibiting sales of

1/ U.S. military aid to Egypt was not resumed until after 1978.

sophisticated weapons to Latin American and African nations, sales to gross violators of human rights and specific legislative restrictions all placed Chile, Argentina, Brazil, Ecuador, Zimbabwe (Rhodesia), South Africa, Angola, Mozambique, and Ethiopia in the excluded category.

This snapshot approach is conservative because only those countries which the United States would not sell any equipment are placed in the excluded market. It is designed to identify a core of nations to which the United States would not sell arms between 1973 and mid-1978 to provide some measure of the extent of disagreement over sales policies. Other borderline countries could have also been placed in the excluded category if the sales involved sophisticated equipment, but they were not excluded because the United States was providing some equipment to these countries. For example, French sales of Mirage fighter aircraft and missiles to Peru, Morocco and Spain are placed in the acceptable category

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If

these sales were categorized as excludable, the gap between the United States and France would have widened considerably.

The chart below shows the importance of different excluded markets for the major European suppliers on a regional basis.

CHART VI

Value of Military Arms Agreements
to Excluded Countries, 1973 to mid-1978
(in millions of current dollars)

	France		FRG		UK	
	Value of sales	Percent of total sales	Value of sales	Percent of total sales	Value of sales	Percent of total sales
Europe	\$ 0	0	\$ 505	9	\$ 0	0
Middle East	3,338	33	1,081	20	1,448	17
Latin America	522	5	625	11	151	2
Asia & Pacific	629	6	18	(a)	100	1
Africa South of the Sahara	15	(a)	10	(a)	7	(a)
Communists	181	2	9	(a)	352	4
	<u>\$ 4,685</u>	<u>46</u>	<u>\$2,248</u>	<u>41</u>	<u>\$2,058</u>	<u>25</u>
Total sales	<u>\$10,076</u>	<u>100</u>	<u>\$5,464</u>	<u>100</u>	<u>\$8,326</u>	<u>100</u>

a/ Negligible, less than 1 percent.

With over 40 percent of their new export agreements made to excluded markets, French and FRG trading practices appear to present major obstacles to reaching agreement in collaborative programs. Gross agreement figures, however, do not take into account the conventional arms sales policies of the exporting nations, the sophistication of the equipment sold, and the impact on sales policies of a nation's attitude toward collaborative programs. These factors must be considered in defining the extent of the conflict.

Sales policies and practices of major suppliers

Although there are many similarities among the United States and major European suppliers in rhetoric on conventional arms control, foreign policy differences have been responsible for the different sales patterns in practice. The greatest area of disagreement is in the Middle East. In this part of the world, the United States sells to Israel, while European suppliers sell to Israeli adversaries (including Iraq, Algeria, Libya and Syria). In Latin America, the FRG and France often sell sophisticated equipment to countries to whom the United States would not sell because of their human rights record. Other countries of considerable contention include Pakistan and India, major customers of France and the UK, and Turkey, a major customer for the FRG in the 1973 to 1978 period.

These differences in trading patterns occur despite similar rhetoric from supplier countries on arms control. All suppliers also exercise some government controls over sales and express concern over the escalation in the conventional arms trade. To illustrate, FRG policy prohibiting sales to "areas of tension" appears more restrictive than even the U.S. policy; nevertheless, over 40 percent of FRG weapons sales are to countries the United States refuses to trade with.

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France

National independence is the cornerstone of both French foreign policy and arms export practices. In explaining the French sales policy, government officials stress the importance of arms exports for building an autonomous defense industry and extending French influence around the world. The French are quick to emphasize that their domestic market is too small to support an independent defense industry. This has led France to aggressively market sophisticated weaponry around the globe. The French criteria for approving or

rejecting requests are not well publicized. However, some sales intended for a belligerent country involved in conflict or prohibited by United Nations resolution are rejected. France is also more apt to approve the sale of equipment designed to defend against external aggression rather than to be used for police or repressive actions. France also may restrict the transfer of high performance armament, especially if it introduces new sophistication into a region. On the other hand, France offered its latest line of equipment when competing with the United States and the Soviet Union in the Middle East. The Soviets usually supply late model equipment after which the French offer modern equipment. In collaborative intra-European agreements, there are apparently no restrictions on French sales.

The French have generally been unsuccessful when in direct competition with the United States in acceptable European and Middle East markets. This is particularly true in the fighter aircraft and missile field as illustrated by the European countries' selection of the F-16 over the French Mirage F-1, a U.S. win of the European light fighter aircraft market. At the same time, France has been quick to move into markets abandoned by the United States for foreign policy reasons, such as Pakistan, Iraq, Libya, Argentina, Ecuador, and Peru. French sales to these markets have involved highly sophisticated ground, air, and sea armament. Using our conservative definition of the countries where all U.S. arms sales would be excluded, 60 percent of all Mirage aircraft sales go to such countries, and 82 percent of these Mirage sales went to three Middle Eastern countries--Iraq, Egypt 1/, and Libya. Therefore, French dependency on such countries for its aerospace market is the crux of the dispute between the United States and France over arms exports in other aerospace markets. This also accounts for French concern about collaboration in air-to-air missiles since their major missile customers are the same countries.

The chief items in the \$3.3 billion Middle East market were helicopters, Crotale surface-to-air firing units, and other ground armaments. The two most important French customers in the excluded category in this region which account for a full one-third of total French sales were Iraq and

1/ Sales to Egypt would now be permitted but, the French may have difficulty competing in this market, especially since U.S. FMS funding will lead to sales by U.S. producers.

Libya. French agreements to other excluded Middle East countries were made with Syria, Egypt, and Algeria. Below is a list of items covered in French agreements with Libya and Iraq.

Major sales to Iraq

<u>Year</u>	<u>Item</u>	<u>Cost</u> (millions)
1974	Super Frelon helicopters	\$ 128
1975	Gazelle & Puma helicopters	280
1977	Mirage F-1 aircraft, MATRA 550 air-to-air missiles, Puma Helicopters	1,400

Major sales to Libya

<u>Year</u>	<u>Item</u>	<u>Cost</u> (millions)
1974	Mirage F-1s	\$288
1975	Missile attack boats, naval cruise missiles, night vision devices	315

Far behind with 5 percent of France's total sales is Latin America. Sales to Pakistan (\$500 million) and India (\$188.6 million) made up another 6 percent of that total. Their Latin American market included Ecuador, Argentina, and Brazil. These countries purchased Mirage fighter aircraft during the period. These purchases accounted for 13 percent of Mirage sales in the excluded market. Argentina also purchased light frigates and Ecuador purchased French tanks. Pakistan, an excluded customer and consistent buyer of French hardware since 1962, purchased a wide array of equipment during the 1973-78 period, including Mirages, Crotale surface-to-air missile systems, Alouette and Puma helicopters, submarines, ammunition production facilities, and Exocet missiles. The major sales deal with India is a purchase and licensing agreement for MATRA 550 air-to-air missiles.

French motivations for selling arms in countries where the United States would not sell are both foreign policy and commercially inspired. On the foreign policy side, the French are interested in developing good relations with Middle East oil producers (almost 50 percent of French oil imports are

from Iraq and Saudi Arabia, France's primary arms customers) and providing nonaligned nations with an alternative arms supplier. On the commercial and economic end, France lost in direct competition with the United States and pressure built up to support France's domestic aerospace industry and to lower the unit costs of its own military equipment. France, therefore, promoted sales in markets the United States had chosen not to compete in.

Today, the French aerospace industry is heavily dependent on exports, with twice as many Mirages built for export as for home use. French ground armament orders also doubled between 1974 and 1975, with 1975 orders 10 times those in 1970. Even using our very narrow exclusionary U.S. criteria, more than half of these sales would probably have been objected to by the United States.

Conclusions

The gulf between France and the United States over what countries are proper recipients of sophisticated armament is very wide both in customers selected and level of sophistication and will limit the chances for future collaboration. This is particularly the case in the aerospace field. The French record, when in direct competition with the United States in the fighter aircraft market, is not good. France is, therefore, dependent on noncompetitive markets to gain enough exports to support its industry. This does not mean that there are no chances for collaboration between the United States and France with the United States retaining control over exports. On the contrary, projects that do not have large export market potential or are not dependent on exports for economic viability should have a chance. In other cases, if the acceptable market for a particular product is large enough and France can capture a portion of the market, the incentive for French collaboration would exist.

Federal Republic of Germany

The FRG supports a restricted sales policy, promoting only sales to NATO allies and Japan, Australia, New Zealand, Switzerland, and Austria, and prohibiting sales to "areas of tension." FRG is unique among European countries in claiming that exports are not needed to support the domestic defense base. Instead, the FRG argues that its production capacity is carefully calibrated to the domestic market. It sees this approach as different from the UK and France who suffer from underutilized defense capacity which increases the pressure to export. A departure from this practice is the shipbuilding industry which has been depressed for a number of years.

FRG sales practices differ widely from the United States in recipients included, level of sophistication, and readiness to create indigenous capacity through licensing arrangements. On the other hand, the FRG has not yet sold highly sophisticated ground and air armament to markets outside of Europe and so far has been willing to accept U.S.-imposed constraints in licensing arrangements between American and German industry (see ch. 3).

As indicated in the chart on page 16, the greatest problem between the United States and the FRG over sales would most likely concern the FRG's \$1 billion in excludable Middle Eastern sales, including

- over \$538 million to Algeria in 1974 and 1975 to build rocket production plants and a military and industrial explosive plant;
- \$69 million to Egypt in 1976 and 1977 for production of machinery and technical assistance to produce artillery ammunition and rockets;
- \$66 million to Iraq for tank transporters (1973) and for trucks and tractors (1977); and
- \$73 million to Syria for Mercedes tanks (1974) and a laser range finder (1976).

Although some of these sales were to "areas of tension," their low-level of sophistication shows a deliberate FRG effort to minimize the break with their own policy.

Because licensing arrangements do not require increased FRG production capacity, these sales, in a broad sense, support FRG contentions that defense production capacity is not geared to the export market. Furthermore, the absence of Leopard tanks sales to the Middle East is by design rather than chance; for example, the FRG refused to sell Leopard tanks to Iran. The sale was rejected both because Iran was considered an "area of tension" and because the proposed deal might measurably increase the capacity of tank producers.

The most notable exception to FRG restraint policies occurred in a 1977, \$240 million sale of HOT and MILAN anti-tank missiles to Syria. Jointly produced by a French-based, French-German consortium, sales of these missiles were handled by France under their laws. As the final assembler, the sale counted as a French sale although German parts were included. The government-to-government agreement apparently did not provide for a FRG veto. Clearly a violation of FRG restraints

on sales of sophisticated and offensive equipment to areas of tension, this sale aroused some domestic controversy and stimulated some rethinking on the FRG part about the wisdom of relying on informal methods of handling third country sales.

Of \$862 million in recent FRG sales to Latin America, \$625 million went to countries to whom the U.S. would not sell. The bulk of these sales were made to four countries, including

- six submarines to Argentina (value \$430 million); the FRG produced one vessel and the purchasing country built the remaining vessels with FRG technical assistance;
- two minesweepers to Brazil (\$21 million);
- an anti-tank guided missiles and an assembly plant to Chile (\$25 million); FRG visibility was low because Brazil purchased and delivered the plant to Chile; and
- guided missile patrol boats with Exocet missiles and two submarines to Ecuador (total value \$112 million).

All but the small Chilean sale was of naval vessels or equipment. The depressed state of FRG shipbuilding creates domestic pressures to export to keep employment levels up. Opportunities to collaborate on naval equipment, however, are limited by the differences between U.S. and European naval roles, so that potential sales of this type are unlikely to become a problem between the United States and Germany.

The only major European producer to trade with Turkey during the U.S. embargo, the FRG justified the sales by the need for Turkey to meet its NATO commitments. Before finalizing the deals, the FRG reportedly cleared the sales with other NATO allies. Major sales to Turkey included:

- a \$132 million sale of three submarines in January 1975 (one to be built in Germany and the other two to be built in Turkey);
- a \$103.6 million sale of 14 patrol boats (one to be built in Germany and the others to be built in Turkey); and

--torpedoes, aircraft spares, logistical support, parachutes, landmines, etc.

In the South Asian region, a few sales were made to Pakistan or India during the 1973 to mid-1978 period. Recently, however, the FRG concluded a sale of a \$150 million air defense radar system to Pakistan.

Conclusions

Although the differences in arms export customers between the FRG and the United States appears at first glance to be as wide as with France, the United States is likely to find enough common ground to reach agreement on collaborative projects. Given the more limited opportunities for naval collaboration, the FRG's Latin American sales do not point to a significant third country sales problem. FRG sales to Turkey appear to have been Alliance-sanctioned and the lifting of the U.S. embargo has also eliminated Turkey from the excludable category. India and Pakistan may no longer be excluded given new U.S. concerns about the Soviets in South Asia. The Middle Eastern sales appear to be the major problem and even here, FRG sales are of less-sophisticated technology or production facilities where the domestic economic benefits are less. These reasons, coupled with the FRG's unwillingness to sell sophisticated ground armament outside NATO, suggest that the FRG is unlikely to insist on keeping a national sales prerogative despite their new status as a major exporter. Further evidence of their readiness to compromise for the sake of collaboration is the FRG acceptance of U.S. controls in recent dual production projects (see ch. 3). This position matches the FRG's postwar desire to keep a low profile in arms sales.

United Kingdom

The UK takes a pragmatic approach to arms sales. When potential sales are consistent with UK foreign policy, it is considered to be in the national interest to compete for them. The government, therefore, actively promotes sales to friendly nations looking for UK defense equipment. Although control of conventional weapons sales is considered a worthy goal, like the French, the UK sees agreement between the largest suppliers, the United States and U.S.S.R., as the first step. A licensing mechanism is used to control sales on a case-by-case basis. UK bureaucratic criteria for analyzing sales include: the sale's effect upon UK national security; its compatibility with foreign and economic policies; its conformity to treaty and alliance obligations; and its contribution toward lowering UK unit costs.

Arms sales generally are supported because of their benefits to the UK defense industry and their ability to offset balance-of-payments drain from foreign equipment purchases. Arms sales are considered particularly necessary for highly competitive systems with advanced military technology to recoup R&D investment, to extend production runs, and to allow the UK to keep highly skilled engineering teams together. For this reason, the UK is ready to sell highly advanced weapon systems to countries outside of NATO even before the equipment becomes standard within the UK armed forces inventory.

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As international competition for arms customers intensified, UK industry has offered a wide range of purchase plans outside of NATO, including licensed production or assembly in the customer country. Another form is the offset purchase of customer products up to a percentage value of the total contract. Yet another approach is to have the UK find foreign customers for the purchaser's exports to offset the purchase.

In the case of cooperative projects, the UK decides on a case-by-case basis how to treat third country sales. As a general practice, the UK believes in requiring consultation before a sale is made but does not insist on strict unilateral control. Accordingly, the UK does not require UK approval of sales by participating countries. Like the FRG, UK participation in excludable sales is understated in collaborative projects where final assembly and sales negotiations are handled by the French (e.g., Jaguar, MILAN, Martel missiles).

As indicated in Chart VI, UK patterns closely resemble U.S. sales with only 25 percent of their sales going to countries excluded from the U.S. sales market. Based on these trading patterns, the prospect for reaching agreement on acceptable export markets appears to pose few problems. On the other hand, recent cancellations by Iran (acceptable) and Egypt (excluded) may complicate future cooperation as the UK looks for alternative customers. For example, the recent \$2 billion Jaguar fighter coproduction deal with India will dramatically tilt the statistical picture to the excluded category.

Of the \$2.1 billion in excluded UK sales, Egypt accounts for 67 percent. The bulk of these sales are licensing arrangements made with the now defunct Arab Organization of Industrialization, an Arab consortium made up of Egypt, Saudi Arabia, Qatar, and the United Arab Emirates. These agreements

include initial direct purchases from the UK to prime the manufacturing pump. Examples were licensing of the Swingfire anti-tank gun and the Lynx helicopter. As in their acceptable sales, the UK has met the challenge of U.S. and French competition by agreeing to build up indigenous defense production in third world nations.

Small sales agreements were also made with Libya (Swingfire anti-tank missiles and mobile communications equipment), Iraq (unspecified equipment), and Syria (trucks)--all countries to whom the United States does not sell. UK sales to excluded Latin American countries accounted for 1 percent of their total sales. These sales agreements include: \$9.2 million to Argentina, \$46.6 million to Brazil, \$29.1 million to Chile, and \$65.9 million to Ecuador, who ordered Jaguar fighter aircraft. During the 1973 to 1978 period, the UK continued to sign new agreements with India and Pakistan but at a relatively low volume. As indicated earlier, the statistical picture will shift dramatically because of the \$2 billion UK agreement with India to coproduce Jaguar fighter aircraft.

Conclusions

In summary, the United Kingdom and the United States are not far apart when it comes to acceptable customers. Although the movement of Egypt to the acceptable category following the Camp David accords further reduces the potential for differences between the United States and UK, Egypt is unlikely to buy from the UK when FMS credits are available for purchases of U.S. equipment. Egypt may well prove to be a newly acceptable but no longer available UK customer. Along with the cancellation of Iranian sales, which accounted for about 25 percent of UK total sales, this places additional pressure on the UK to find alternative customers. This pressure may dampen an otherwise optimistic prospect for agreement on exports in collaborative projects.

CHAPTER 3

COLLABORATION ON U.S. DEVELOPED SYSTEMS

Designed to give the Europeans access to U.S. developed systems while isolating the U.S. procurement process, dual production or licensing separate European production is a collaborative method with few takers. Because of the high visibility of U.S. developed systems, the United States generally continues to closely control exports by foreign licensees. Typically, the United States has required case-by-case approval for all sales outside the NATO market and has competed with Europeans for third country sales. Under these conditions, however, the UK and the French have not been willing to give up nationally developed systems to participate in dual production programs because they are unable to compete with the U.S. producer in the same market. They prefer to produce their own nationally developed systems which they can export freely. On the other hand, the Germans have been more willing to accept U.S. controls to get access to U.S. technology.

If duplicative development is to be avoided, however, the UK, France and FRG must all participate. Only then will maximum R&D money be saved and equipment be fully standardized. For each participant, then, resolution of the sales issue becomes a test of the worth of collaboration. Both sides have modified their positions in collaborative projects. Just as the FRG has been willing in some cases to accept U.S. vetoes over its future exports, so the United States has on occasion offered to share rather than compete for the third country market. For example, one proposed agreement would give advance approval to a designated group of acceptable countries in a sales territory, with little or no competition likely because U.S. production will be completed. In another case, as a concession to gain UK and French participation while maintaining control over transfers, the United States agreed to share the third country sales market. Thus, the European licensee need not face U.S. competition.

Only a handful of the 17 systems offered by the United States to NATO in the spring of 1979 have aroused much interest. The general unwillingness of France and the UK to adopt U.S. developed systems stems from the

- inability of a follower producer to compete with the developer in the same market because of their smaller quantitative requirements, less efficient production practices, and reliance on worksharing within Europe; and

--existence of alternative nationally developed systems which can be exported freely.

To retain its national prerogative to control who receives U.S. designed equipment, it may well be worthwhile for the United States to share rather than compete within a U.S. defined acceptable market.

Most of the interest in dual production has come from the FRG. They are receptive to U.S. initiatives because they buy U.S. systems to make up for their own limited R&D base. To lower their unit costs, the FRG has to pull in smaller NATO countries through offset arrangements, a role which the United States recently rejected because of concerns about its inefficiency and the impact on U.S. costs.

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Using case studies, the sections below explain why the Europeans have difficulty competing with the United States in the same market and why the FRG has been more willing to accept U.S. constraints. The latter sections then explore the few cases where the United States may get the UK and France to dual produce U.S. systems.

DUAL PRODUCTION--ALLIED PROBLEMS WITH
COMPETITION FOR EXPORTS

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The AIM-9L MOU provides that the German-led consortium must get advance written permission from the United States for all sales although exports to other NATO nations will be given "sympathetic consideration." The MODFLIR agreement similarly requires case-by-case U.S. permission for exports but agrees to consider as acceptable all sales to NATO nations buying the HOT, MILAN, MARDER, LUCHS, VBH, and Leopard systems. The United States also agrees to let the FRG-led consortium compete for sales to countries where the United States would be willing to sell and agrees not to deny permission for commercial reasons but retains control for security or foreign policy reasons. Although an agreement on Stinger has not yet been signed, export sales of this man-portable missile system capable of shooting down aircraft are likely to be confined to NATO because of fears that the system might fall into the hands of terrorists.

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European producers cannot successfully compete for exports on a cost basis because

- with the developer's headstart, the U.S. contractor's production will be further down the learning curve by about 4 years;
- significantly larger U.S. quantity requirements give the United States cost advantages; and
- European production costs are reputed to be inherently higher than U.S. costs because European programs, are designed to maintain stable employment in defense industries, are less highly mechanized, lack competitive pressures, and must absorb higher social benefit costs.

The relationship between "learning"
and costs

Because U.S. quantity needs are far greater than European, their costs will be significantly higher. This is partly due to a phenomenon known as the learning curve. For many years, the aerospace industry has used learning or cost improvement curves to predict life-cycle equipment costs. Based on the characteristics of the item produced and prior experience with similar items, analysts can predict how unit costs will fall as the number of items produced increases. For actual costs to reflect these estimates, however, production scheduling must remain relatively constant without significant breaks or stretchouts and capital equipment must be used efficiently.

Learning curve theory holds that with each doubling in total quantities produced, the cost per item is reduced by some constant percentage of previous costs. As workers become more familiar with production processes, they develop more efficient methods. More labor-intensive operations, therefore, tend to have greater savings than highly mechanized production. For example, aircraft production has a high learning curve of 80 percent because of the skilled labor required, meaning that unit costs fall by 20 percent with each quantity doubling. In contrast, ammunition production, which relies heavily on machines has a lower learning curve.

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Impact of European production practices
on cost competitiveness

In addition to the significant impact of quantity requirements on unit costs, European production costs are reputed to be inherently higher than U.S. costs. The chief European practices considered responsible are:

- a concern for maintaining stable employment in defense industries;
- higher social benefits;
- less highly mechanized production; and
- lack of competitive pressures.

European companies are said to be unwilling to lay off people during production drops or work overtime or double shifts during production gear-ups. For this reason, European governments are said to favor long and stable if lower production runs. In nationalized companies particularly, political pressures make production layoffs impossible and uneconomical given the obligations to pay these workers benefits for extended periods. Government-owned companies appear to face greater pressures than private companies who can simply cut

off or transfer their subcontractors to other activities. ^{1/} Longer vacations and more extensive social benefits increase European labor costs and tend to make their defense industry less competitive. These practices are reputed to create over-manning, lowering productivity.

Experience in previous programs suggests that European production costs will exceed U.S. costs by 15 to 20 percent. Based on F-16 coproduction experience, for example, a recent Army study projected that FRG unit labor costs (including fringe benefits) would be 20 percent higher than the United States. This matched European experience in AIM-9L and Improved Hawk missile coproduction. It should be pointed out that these agreements typically involve participation of the smaller European countries where production scale would differ most.

Unlike U.S. industry, European industries seldom face competitive pressures domestically because the size of their domestic markets cannot justify the existence of more than one to three companies in a particular area. European governments, in fact, encourage specialization, e.g., the French government turns to nationalized Aerospatiale for future aerospace programs, particularly those involving collaboration, whereas the privately-owned Dassault specializes in fighter aircraft. Designating "chosen instruments" allows a company to build and maintain a corps of engineers in a particular area while removing competitive pressures. To some extent, competitiveness is maintained at the subcontracting level and through export sales. Competition for exports also forces companies to pay close attention to their improvement curves. The ultimate possibility of imports--in the UK and the FRG at least--also creates competition. Consolidation efforts in the last 10 to 20 years have also reduced the number of firms.

Offset as a marketing device: the FRG picks up where the United States left off

The FRG has successfully used offset arrangements to increase NATO collaborative participation and the viability of German production lines. For the smaller NATO country market, offsets are the key factor in determining which nation captures their market. In return for a buy, the developer agrees to place part of his production work in the purchaser's

^{1/} About 60 percent of French defense production is in government-owned facilities, 66 percent of UK production, and a lower percent of FRG production.

country to provide work for domestic contractors as well as compensate for foreign exchange outlays. Because the Department of Defense will not support offsets and the FRG endorses offset agreements, the FRG is likely to capture the smaller NATO market. On the other hand, the UK and France are not enamored with offsets, and their participation in dual production will be decided more on their desire and need to gain access to U.S. technology.

In May 1978, the Department of Defense announced the United States would no longer make coproduction arrangements with specified levels of offset unless there was no other way to reach agreement on collaboration which promised significant security benefits to the United States. Citing the "inherent difficulties in negotiating and implementing compensatory coproduction and offset agreements, and the economic inefficiencies they often entail," Under Secretary of Defense Duncan announced that if the United States agreed to compensatory offsets, the agreements should be structured broadly without specifically defined offsets and open to competitive bidding. These new guidelines were developed in reaction to the F-16 fighter aircraft program, the largest U.S. coproduction program, where a multinational U.S.-European consortium integrated production for both national requirements and export sales. In this way, although the United States unilaterally decides whether particular sales should be made, all parties share the benefits. The third party sales issue is defused because the export market is shared. The basic problem with this integrated joint production concept is that it entangles U.S. procurement with higher cost European subcontractors, increasing U.S. costs.

To meet these specified offset levels, the U.S. F-16 prime contractor, General Dynamics, allocated production work to particular European firms on a noncompetitive basis. European-produced components cost considerably more than U.S. parts, primarily because of their higher labor costs, additional contractor loadings (management fees), and shorter production runs. In some cases, European costs were double the cost of an American contractor. The U.S. Government does not oppose U.S. contractors making "offset" agreements to cement sales as long as no U.S. Government guarantees are required. This U.S. unwillingness to make offset commitments may reduce the opportunities for standardization, particularly with smaller European nations.

Unlike the United States, the FRG is willing to allocate production to smaller NATO countries to persuade them to buy a weapon system. For the FRG, providing offset is a key marketing device within Europe. Rather than compete on a cost basis for the NATO export market, a European consortium simply

expands its membership, enlarging its assured market by offering industrial participation. They have adopted this approach in marketing U.S. developed systems which they want to produce, like the AIM-9L missile and the MODFLIR night vision system.

To European governments who want to convince voters of the worthiness of the defense budget, social and economic as well as security benefits must be demonstrated. The defense jobs and new technology which come with industrial participation could compensate for the higher unit costs of European-produced systems. In the past, European countries have been willing to pay substantially more for military items which are nationally produced rather than imported. For example, the Dutch reportedly will pay almost double the cost of a U.S. tank for a coproduced Leopard tank and the FRG reportedly paid four times more for a coproduced HOT missile rather than buy a U.S. TOW missile.

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For the UK and France, offset is a less important factor than access to and development of new technology. In areas of technology where the United States has a clear technological lead--such as missile guidance and control systems--access to U.S. technology may be a very attractive offer.

To keep the U.S. technology lead, it was DOD policy to restrict access to the most advanced or critical technology. In an August 1977 DOD memorandum, however, an exception to this policy was made for items which would "maximize the effective return on the collective NATO alliance or other Allied investment in R&D," or further standardization and interoperability. Thus, the NATO countries are given a special status to further standardization. Technology may prove to be the chief U.S. drawing card in increasing collaboration with the major producers; hence, the European interest in codevelopment discussed in the next chapter.

Splitting the acceptable market by
product differentiation: an exceptional case

In the MODFLIR case, the FRG was purchasing night vision technology for its Leopard II tanks and other ground armaments. The U.S. version will fit both main battle tanks and anti-tank hand-portable units, whereas the German model will fit the Leopard tank, HOT and MILAN missiles, the Marder, Luchs, and VBH systems. The competition issue was therefore shifted to the launcher rather than the dual production item. Moreover, the German policy restricting ground armament sales to NATO and other exempted Western allies matched U.S. desires to control exports. In the MOU, the United States gave advance approval for German sales to the NATO market. The UK and France, on the other hand, had developed their own night vision capability and chose to stay with their nationally developed programs so as to export freely. In fact, UK readiness to sell its night vision equipment increases the competitiveness of its launchers when the United States is unwilling to supply that capability.

In this way, the U.S. and FRG-led consortium have effectively divided future exports with competition transferred to the launching system. Higher European costs for this small system, which are reported to increase capability three-fold, would not be significant in the context of the entire missile system. Since the Leopard tank, as well as the HOT and MILAN missiles, have been widely sold to smaller NATO countries, the FRG consortium can count on a relatively large export market.

For the FRG, the MODFLIR offered them a way to increase the competitiveness of their Leopard tank by taking advantage of the 3 to 4 year U.S. lead in night vision development. Since the FRG markets its Leopard tanks primarily in Europe, U.S. sales policy limitations pose few, if any, disincentives. Therefore, when the United States offered complete MODFLIR technology (with a waiver of R&D recoupment and prior sales approval for the NATO market), the FRG seized the opportunity. In fact, the government offer was also much more attractive than its industrial predecessor which limited the technology transferred and required larger direct purchases from U.S. contractors.

Is this type of implicit market split for auxiliary items likely to be equally applicable to the UK and France? These two countries are unlikely to produce U.S. auxiliary equipment if it means the United States will effectively gain control over major item sales because much of their traditional markets are unacceptable to the United States. The stakes are simply too high and the compromise too great. In early 1980,

for example, the UK completed a \$300 million deal to sell Shir tanks to Jordan. One of the reasons given by Jordanian defense officials for selecting the UK tank rather than the American M-60 tank was the U.S. refusal and the UK willingness to include night vision capability. This single sale is equal to almost half of all the imports by smaller NATO countries in 1977.

SHARING THE THIRD COUNTRY SALES MARKET:
BRINGING IN THE UK AND FRANCE

In return for defining the acceptable third country market, the United States agreed in two cases to share exports noncompetitively, a departure from previous policy. To attract the UK and France to dual production of the Multiple Launch Rocket system (MLRS), the United States agreed

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In the proposed M-735 anti-tank ammunition agreement, the French will be offered the right to sell to a designated list of U.S.-acceptable countries without facing U.S. competition. In both cases,

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In the MLRS program, the United States is developing the general rocket system and five of the six rocket pods; FRG is developing the sixth munition, a scatterable anti-mine warhead. The UK and French development role is now limited to small funding contributions but could be expanded after maturation. No country is yet committed to the program beyond the full-scale engineering development phase.

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What made all major European producers willing

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None of the European producers had invested

in a comparable system. A highly sophisticated system oriented almost exclusively to NATO theater needs, future sales outside NATO are likely to be limited so the likelihood of disputes is low. Finally, in this case,

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This commitment to share exports appears to have been an outgrowth of:

- European concern about the viability of a separate national production run based solely on the quantities needed by the participants;
- U.S. concern about retaining the right to sell this largely U.S.-developed system to its traditional allies; and
- European interest in offsetting their purchases of the U.S.-made launcher, the Infantry Fighting Vehicle.

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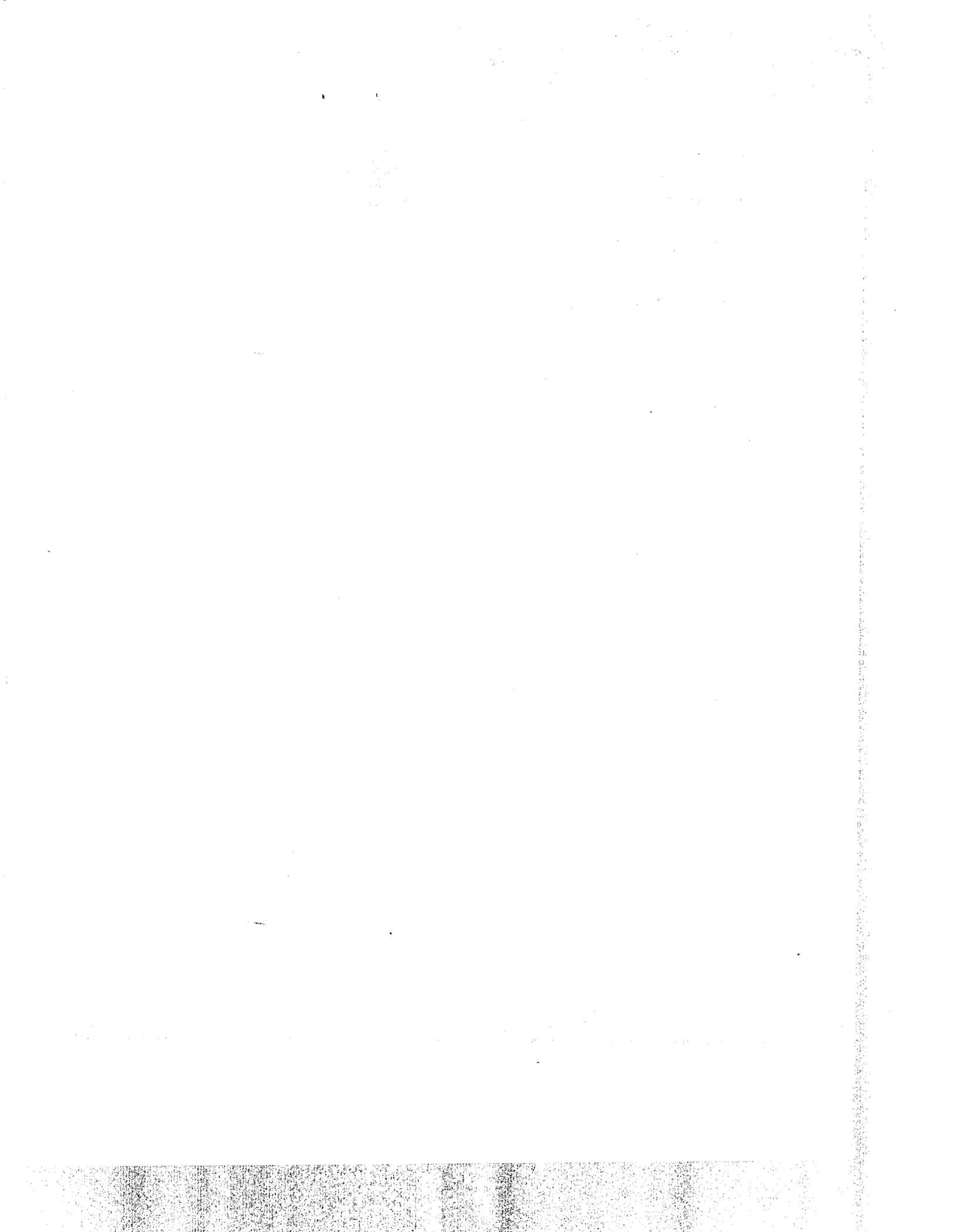
There may be a legal impediment with implementing this U.S. commitment to share the acceptable third country sales market. Section 42(c) of the Arms Export Control Act in effect prohibits a foreign customer using U.S. foreign military sales credits or guarantees from buying foreign-produced systems if this adversely affects the U.S. economy or industrial base. Assuming country X approaches the United States for a MLRS purchase,

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If foreign policy and security concerns outweigh potential economic costs, the Congress could remove NATO production sources from the restrictions of section 42(c). Such a waiver would give the administration more flexibility to negotiate marketsharing arrangements to handle the third country sales problem without making concessions on U.S. technology control.

The PATRIOT ground-to-air missile system may well be a similar case. Only the United States has made the almost \$2 billion R&D investment. Again, the system's chief market is expected to be limited to NATO because of the high level of technology. Coupled with a U.S. marketsharing offer, PATRIOT may gain the participation of major producers if the MLRS experience is a guide.

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CHAPTER 4

ADMINISTRATION MAKES CONCESSIONS

ON EXPORTS IN CODEVELOPMENT PROJECTS

To reach agreement in codevelopment projects where the potential standardization benefits are greatest, the administration is using mechanisms other than case-by-case veto of exports outside NATO. As the stakes have increased, the administration has loosened its controls over third party transfers of systems in which U.S. technology is embedded. As in any negotiation, both parties made concessions to reach agreement. The Europeans accepted some U.S. constraints on their exports while the United States no longer insisted that all export sales be subject to a U.S. veto if any U.S. technology was included.

Our case studies showed a trend to grant greater concessions over third country transfers as the potential standardization benefits increase. The extent of the clash between U.S. sales policy and NATO standardization policy was also revealed. This issue has come to a head in the air-to-air missile family of weapons agreement submitted to the Congress on March 22, 1980.

To reach agreement, the United States modified its sales policy for the sake of collaboration. Despite the importance of these policy decisions, congressional participation is limited because the Arms Export Control Act is not designed to deal with the new forms of collaboration. These decisions may require a departure from the U.S. sales policy and do set the rules governing arms transfers to be made in the next decade or beyond. If arms transfer concessions are to be made for the sake of standardization, the Congress, with its legislative endorsement of both policies, may want to expand its prerogatives in establishing where the line on making concessions should be drawn. At the same time, we recognize the administration needs flexibility to negotiate international agreements. For these reasons, we propose a range of legislative alternatives, some of which would enhance the congressional role and may limit administrative prerogatives and another which would give the administration greater negotiating flexibility. Given the importance of the policy trade-offs, however, the Congress may wish to participate in the reconciliation of the two foreign policies now in conflict.

To determine the types of choices open to U.S. negotiators, we reviewed several collaborative development programs-- the ATLAS II laser designator, the ROLAND II ground-to-air

defense system, the new air-to-air missile family of weapons, and the ERMIS minesweeper. The case studies show that the United States departs further from its traditional controls as the amount of U.S. technology in the collaborative project decreases.

In the ATLAS target laser designator case, where a U.S. contractor developed a system for a French firm, the administration agreed to expand the acceptable sales territory beyond NATO.

In the ROLAND ground-to-air missile system, where the United States modified a French-German-developed system, the administration agreed to mutually

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In a jointly funded codevelopment program evaluating the feasibility of the ERMIS minesweeping vessel weapon system, the administration delayed rather than resolved the third country sales problem. The agreement is ambiguous on the handling of future exports, and the administration could face increased pressure to make concessions as the project's momentum grows.

The standardization stakes in codevelopment are causing the administration to make these concessions. According to DOD, collaboration at an early stage involving all major producers would maximize R&D savings and standardize equipment by heading off the development of competitive national systems. Also, DOD believes that by allocating development responsibility for complementary systems, family of weapons promises to meet these same goals. Interoperable or interchangeable equipment is expected to increase military capability.

The U.S. approach in collaboration appears to be to present as many U.S. systems as possible to the Europeans for dual production and to propose codevelopment and family of weapons without prior analysis showing where military benefits of standardization would make collaboration worthwhile. Estimates of R&D saved tend to be vague and depend on assumptions about the viability of other systems not pursued by the collaborators and the procurement method selected.

If the Alliance is to get maximum development savings and improved military capability through collaboration, the following conditions must be met:

- the (United States, UK, France, and FRG) must abandon competitive developments and reach agreement on one project for the Alliance in a particular area;
- the most advanced technology necessary for effectiveness must be used to exploit Alliance resources fully; and
- Alliance participation must be sufficiently broad to reduce unit costs through reasonably large equipment runs.

The other significant benefit of collaboration, however, may be the increased political solidarity of the Alliance, and that cannot be quantified. Transatlantic cooperation at its best will pull in both the big and small spenders in the Alliance, giving all participants access to the latest military technology at the least cost to the Alliance as a whole.

It appears that the administration has decided that collaboration is worth giving up part of its national prerogative to control the sale of weapon systems which include U.S. technology. Current family of weapons negotiations require a choice between these two policy goals--early development collaboration with wide NATO participation or retention of national arms export decisionmaking prerogatives. In the current air-to-air MOU, neither goal has been fully met.

FMS AND COMMERCIAL: DIFFERENT
RULES FOR THE SAME TRANSFER
OF TECHNOLOGY

Under the AECA, third party transfers are treated differently depending on whether commercial or government channels

are used. Most importantly, congressional decisionmaking prerogatives over government-to-government collaborative agreements setting the rules for third country transfers vary by the implementation method. Even though the same technology can be transferred through either channel, government-to-government agreements are subject to congressional disapproval if the technology transfer goes through FMS channels but would only be reported to the Congress if the transfer were through commercial channels. In other words, implementation method rather than the significance of the arrangement sets congressional prerogative. Most collaborative arrangements are likely to rely on commercial channels.

If collaboration takes hold, decisions on transferring U.S. technology through commercial channels will be the more important arms sales policy questions of the future, and congressional involvement will be limited. These decisions will be at least if not more important than individual equipment sales and will bind future administrations.

If the transfer is FMS, the Congress must be told the recipient, timing, and reasons for the transfers and be given an opportunity to disapprove of it under section 3(a) and (d) of the AECA. The Congress, however, is not notified in advance and has no option to disapprove a transfer of an item commercially licensed, the State Department having the sole discretion to decide whether a transfer may be made to a third country. This authority gives the State Department almost complete flexibility in setting the terms in government-to-government arrangements of where and to whom foreign licensees can sell equipment containing U.S. technology. This inconsistency permits the State Department to govern transfers, based on the amount or type of U.S. technological contributions rather than the recipients. If it chose, the State Department could in a government-to-government agreement implemented through a licensing arrangement allow a European consortium to sell equipment made using critical U.S. technology to any non-Communist country. Although reported to the Congress under section 36 (d) of AECA, the legislation does not provide that a copy of the licensing agreement accompany the report or mandate that details on agreed-upon sales territories be revealed.

The new section 27 on NATO cooperative projects added by the 1979 act provides that 30 days before an international agreement is signed, the Congress be provided a certification with:

- a description of the cooperative project;
- an estimate of future sales;

- an estimate of charges to be waived;
- the value of costs to be borne by NATO; and
- a statement of the anticipated foreign policy and security benefits.

The section does not give the Congress a right to disapprove the agreement nor require submission of the actual agreement.

The Act defines a "cooperative project" as (1) a family of weapons arrangement where the costs of research and development are allocated and the articles are also "produced for sale" and licensed by the participants; or (2) a project where the costs of development and "joint production" are shared.

The Department of Defense has interpreted the certification requirement to apply only to co-development projects where agreement has been reached on "joint production." DOD has not reported cooperative projects at the development stage. The Act also does not define "joint production" which may further limit the types of projects reported (see p. 63).

Although statutory and regulatory provisions seem broad enough to permit the U.S. Government to give advance approval to exports of systems produced from U.S. technology by foreign producers within a specified territory using either channel, the administration has been reluctant to give up case-by-case approval outside NATO. The administration interprets the AECA to mean that sales territories are permissible in government-to-government agreements contemplating the transfer of U.S. technology through FMS channels if the information requirements of the Act are met. The proposed M-735 antitank ammunition MOU discussed in chapter 3 is the first FMS transfer of this type.

Sales territories are more common in commercial manufacturing licensing agreements which are governed by State Department's International Traffic in Arms Regulations (ITAR). These regulations require that all export licenses for manufacturing items on the U.S. Munitions List include a provision on sales territories, with case-by-case State department approval required outside the territory. In practice, State Department could choose to define the sales territory to include the entire non-Communist world, or could limit sales based solely on technological criteria or could prohibit exports by a foreign producer. The case studies below show State Department's use of its prerogative.

The administration recently signed the ERMIS codevelopment agreement on the basis of general procurement authority rather than using the AECA. Since ITAR regulations only require a provision on sales territories for manufacturing licensing arrangements, initial export of U.S. developed data, like feasibility studies, does not have to address the sales question. This enabled the administration to put off the sales issue until later stages of collaboration.

THE ATLAS CASE: A TEST OF
STATE DEPARTMENT SALES
TERRITORY SELF-POLICING

The ATLAS case illustrates the impact of combining industrial pressure with high-level endorsement of collaboration. To gain European participation, the State Department modified its general practice of restricting third country sales to NATO. This example also shows the extent of flexibility in current regulations governing joint projects.

The ATLAS laser designator, a targeting system fitting single-seater fighter aircraft, was developed by Martin Marietta Corporation as a subcontractor to Thomson CSF, a French firm, under a 1975 licensing agreement. The system was initially designed for single-seater French Jaguar aircraft, but later adapted to fit U.S. F-16 aircraft at Martin Marietta's expense in hopes of capturing the U.S. market.

A 1977 licensing agreement between the two firms split the potential market but no government-to-government agreement has been reached. The agreement may also allow the French to penetrate the U.S. market. If the ATLAS system is selected by the Air Force, shared production between U.S. and French firms may be used for filling French, U.S., and third country sales requirements. In the fall of 1979, the Congress told DOD to open competition for a laser designator targeting system. Martin Marietta, as well as other companies, will be submitting bids.

In the 1950s and early 1960s, the U.S. Government approved many licensing agreements to manufacture U.S. defense equipment and sell products within broad third country sales territories. In response to the concern of the Congress and of those advocating arms restraint, the State Department began to restrict sales territories in older cases and limit territories in new applications in the mid-1960s. To forestall congressional passage of legislative controls on commercial licensing arrangements comparable to those applying to transfers through

FMS or military assistance program channels, the State Department adopted a policy requiring that the licensee get permission from the United States for all individual exports.

According to State Department officials, this policy was applied on a hit-or-miss basis with wide variation in actual application until late 1975. Between 1975 and 1977, State Department policy guidelines called for sales territories to be spelled out in an agreement or limited to the manufacturing country with permission for sales elsewhere granted on a case-by-case-basis. In cases where there are NATO standardization benefits, State Department policy called for limiting sales territories to NATO nations with other sales requiring individual U.S. approval. The ATLAS chronology follows.

In April 1975, the State Department approved a license between Martin Marietta and the French firm, Thomson CSF, to jointly develop, design, fabricate and test a laser-guided weapon delivery system to meet French Air Force needs. The approved French sales territory included eight NATO countries and four non-NATO countries--Australia, Iran, New Zealand, and Spain. Later amendments gave Martin Marietta the exclusive right to sell the ATLAS to the United States, Canada, Israel, and Japan. Thus, the contractors arranged to split the available market. This territory exceeded State Department policy guidelines requiring case-by-case approval of all third country sales of defense articles manufactured abroad under license arrangements with U.S. firms. Although the arrangements were made by the contractors, the export license had to be approved by the State Department.

To get access to U.S. technology, France accepted a smaller sales territory than they wanted. A 1975 amendment included a list of 18 potential recipients, at least 7 of whom would have been unacceptable to the United States in the 1975 time frame. Sales to these countries were not included in the sales territory and were subject to U.S. approval. The French readiness to accept a limited sales territory was a function of their dependency on U.S. technology in the ATLAS system. They have proved less willing to compromise when the U.S. technological contribution is smaller.

In February 1977, State Department officials responsible for approving licensing agreements informally agreed to stiffen their stand on approved sales territories. Henceforth, in cases with standardization benefits, a sales territory would be limited to NATO countries and sales to other countries would require case-by-case review.

Martin Marietta's request for a supplemental license to export ATLAS II, the system adapted to fit the U.S. F-16, provided an early test of the new policy. Demonstrating its new resolve, State ruled that the sales territory for the new supplemental agreement would be limited to the eight NATO countries and sales elsewhere would require case-by-case approval. This decision to limit sales was strongly influenced by State's denial of export licenses to two other U.S. contractors to sell their laser designators.

In October 1977, the U.S. contractor strongly protested State's decision and requested that all countries excluded should be added back. The contractor contended the (1) new restrictions were a breach of the earlier agreement; (2) French Government looked at this case in the broader terms of U.S.-French collaboration and standardization; (3) French had large amounts of R&D funding into the program; and (4) French would be unwilling to accept anything less than the original territory.

In February 1978, State reversed its earlier decision and included Spain, Iran, Australia, and New Zealand in the approved sales territory. To be evenhanded, State also approved the licenses to market laser designators made by the competing U.S. firms--Westinghouse and Northrop--to Iran. All sales of laser designators were to be limited to 50 sets each to--Iran and Spain--with additional sales requiring case-by-case approval.

ROLAND: PRELUDE TO FAMILY OF WEAPONS

If the ATLAS case shows how sales territories can be expanded beyond NATO, the Roland case demonstrates DOD's readiness to allow export of noncritical U.S. technology to the entire non-Communist world. This was the first time the United States approved an export provision which did not identify potential recipients. Developed by a French-German consortium and licensed to a U.S. firm for production, the Roland missile eventually included U.S. modifications.

The U.S., French, and FRG government-to-government MOU envisioned development of a desensitized version to be sold

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The European market therefore included the entire non-Communist world, less traditional U.S. customers.

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The agreement is currently being reviewed by the State Department but is unlikely to be reported to the Congress under current law. The Department of Defense does not consider this Roland supplement to be a "cooperative project" under Section 27 because U.S. modifications were developed after European development was completed. The original 1975 agreement also predates Section 27. As a commercial transaction, the supplement is currently exempt from Section 3(d) reporting.

Relying on an export version to be agreed to at a later date put off the decision on conditions governing the use of U.S. technology while collaborative momentum grew. The U.S. Government commitment to an export version without an explicit sales territory or case-by-case approval could only be made using commercial channels where the State Department could exercise its regulatory authority without any statutory restrictions. This use of the commercial channel may have established a precedent for family of weapons where the U.S. technological contribution is likely to be small but critical rather than non-critical.

According to the original licensing agreement between the U.S. and European companies, the U.S. contractor would produce the European-developed system for sale to the U.S Armed Forces. Since the U.S. firms were importing foreign technology, there was no basis for controlling future European exports. If the United States developed improvements to the system, however, the United States would have a basis for controlling export of any Rolands with U.S. technological additions embedded in them. The agreement, therefore, included the standard ITAR language requiring case-by-case U.S. review of all European sales of systems with U.S. technology outside the defined sales territory. This was initially restricted to domestic French and German requirements. Case-by-case European approval was required for all U.S. export sales.

Between 1972 and 1975, a series of license amendments expanded the European missile territory to include the entire non-Communist world. If the U.S. Government agreed to the initial transfer of U.S. technology to Euromissile, case-by-case review of all sales would be eliminated. No longer was written approval required for individual sales after the

initial U.S. transfer decision. Although the standard ITAR provisions requiring case-by-case review outside an agreed upon territory was included, it was of no importance since the approved territory was the world, less Communist nations. U.S. export control rested on a willingness to deny U.S. improvements to Euromissile. Until the U.S. Government decided to buy the system, no technology transfer from either side would take place.

When the United States selected the Roland over its competitor, the French Crotale and the UK Rapier systems, the commercial licensing agreements were amended to conform to the government-to-government agreement. This 1975 government-to-government agreement with the European participants expanded the exclusive U.S. sales territory to seven specific U.S. customers plus the North and Central American market. 1/ Prior European case-by-case approval was no longer required except for sales to South American countries and Iran.

In return for the expanded market, the U.S. Government agreed to transfer all U.S. adopted improvements to Europe. The unspecified European market now included the world, less Communist and specified U.S. customers. No longer could the U.S. Government deny U.S. improvements to the Europeans if these improvements were adopted by U.S. forces. A timetable for the technology transfer was also established. If either side refused to sell within their territories, the governments are to consult.

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1/ The U.S. market consists of Israel, the Philippines, South Korea, Taiwan, Jordan, North and Central America including Canada and Panama.

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To fit U.S. Army specifications, the Roland was modified in an effort to improve capabilities. 1/ These improvements included an upgraded radar which was transferred and incorporated into French and German Rolands. The U.S. contractors also improved manufacturing methods and testing devices, both adopted by the European producers. Export of these latter U.S. changes has become the center of the new negotiations discussed below.

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1/The United States spent almost \$300 million on these changes, an amount equal to the original development cost. This created charges that the United States "Americanized" the system unnecessarily, and may have decreased the system's interoperability.

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ADMINISTRATION'S SOLUTION FOR FAMILY
OF WEAPONS: THE UNPLEASANT TRADE-OFFS

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By its decision to negotiate two systems simultaneously, the United States reduced its leverage to maintain its case-by-case export policy for the U.S. system to be licensed in Europe because the same provisions on handling exports apply to both systems. Although the U.S. developed AMRAAM will probably not contain European technology while the European

ASRAAM is likely to contain U.S. technology, the linkage exacerbates the already considerable difficulties in reaching agreement on future exports.

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The threshold concept itself assumes that a limited U.S. contribution would somehow eliminate the U.S. responsibility for future exports. That ignores the basic fact about any arms sale--the weapon system purchased increases the military capability of the recipient. Moreover, if the United States contributes its most advanced technology to reap the greatest benefit from collaboration, the U.S. contribution will critically affect the system's capability and the amount is not the key factor. The U.S. technological involvement helps make the system work.

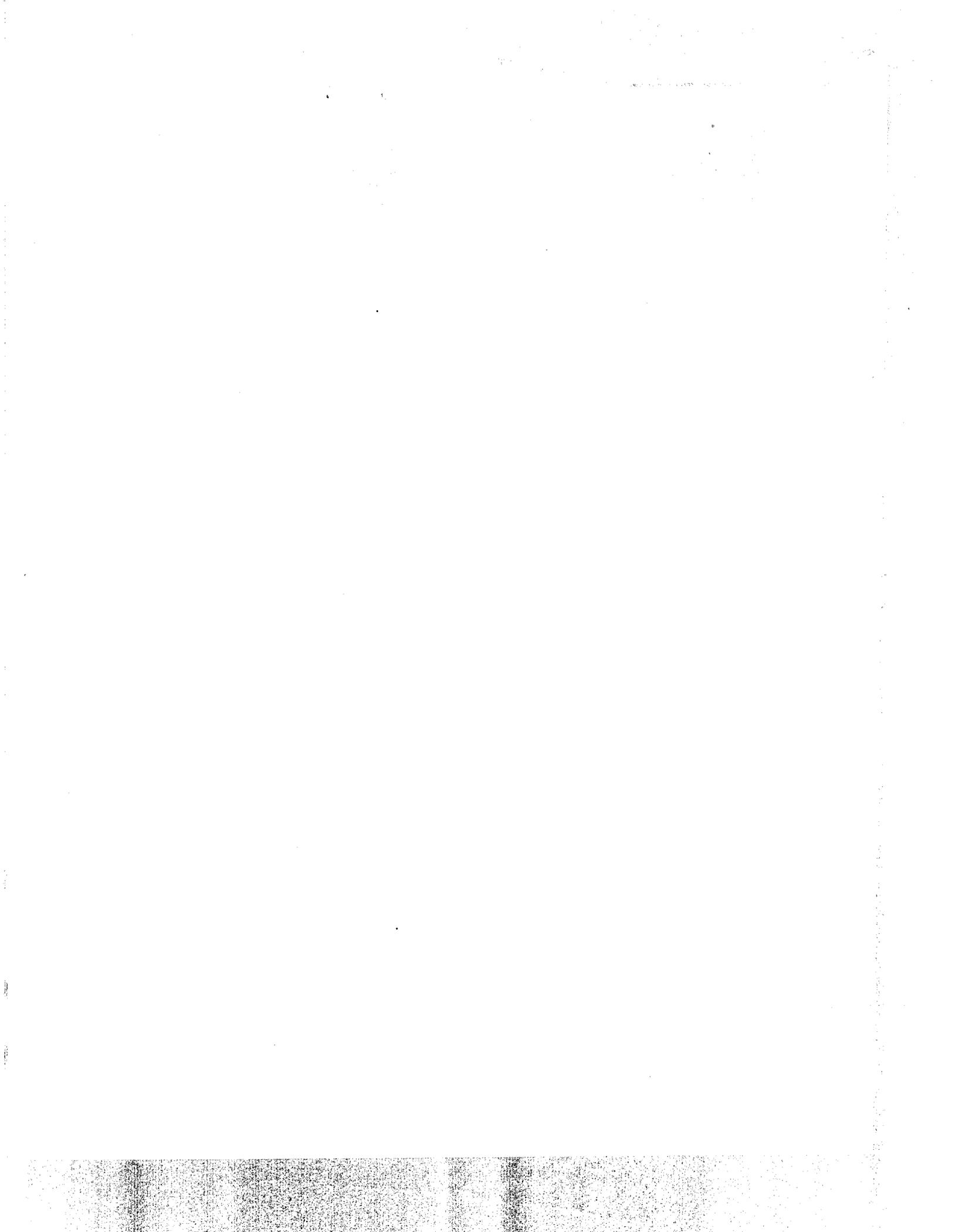
The difficulty in reaching agreement on the air-to-air family of weapons results from the linkage between missile and fighter aircraft sales, the desire for French and UK participation, U.S. technological leadership, and the need to resolve the issue before moving to other phases. The solution for breaking the deadlock is adoption of a technology threshold. The United States is being asked to sacrifice some export control to achieve cooperation.

Limiting the U.S. technological contribution and lifting restraints on exports

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Even more than the "security" provision, these provisions leave the way open for serious misunderstandings among the participants without any clearly defined dispute settlement mechanism.

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Impact of agreement on ASRAAM development

If this proposal is adopted, the Europeans could be motivated to restrict the U.S. technological contribution to the cut off point, regardless of U.S. technical leadership in particular areas. If Europe had technological leadership to develop independently the next generation of short-range missiles, most problems concerning third country sales would be overcome. The United States would simply lose its technological leverage to extract controls from the Europeans. Unlike the Roland case, where U.S. contribution to the export version are not major, however, the United States expects that development of the most effective short-range missile would require critical U.S. technology. Estimated component hardware cost based on experience with previous short-range air-to-air missiles is as follows.

Estimated Cost Breakdown of Short-Range
Air-to-Air Missile Hardware Components

<u>Components</u>	<u>Subtotal Percent</u>	<u>Total Percent</u>
Guidance and control system		40/50
Signal processing	20	
Target detector <u>a/</u>	20/30	
Fuze <u>b/</u>	12/20	12/20
Servo/auto-pilot	--	10
Controls/activator	--	10
Motor, wings, and fin	--	8-10
Warhead	--	5
Radome	--	<u>5</u>
		<u>100</u>

a/The detector could be either a radar seeker (20 percent), or an electro-optical seeker (30 percent).

b/The fuze could be either a radar (12 percent) or electro-optical (20 percent).

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Status of France

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Because France believes that no country can have an independent foreign policy if it depends on others for armament, maintaining the viability of the French defense industry is seen as essential, and exports are seen as necessary because domestic requirements alone are considered insufficient to support viable production runs. Thus, France sees sales as necessary for security as well as commercial reasons, and the air-to-air missile market ties into their large ticket sales of fighter aircraft. On the other hand, allowing France or other European nations to sell to countries prohibited to U.S. manufacturers does offer the advantage of creating competition for the Soviet Union. In the end, if the United States and France are equally unwilling to yield on the third country sales issues, the United States is unlikely to achieve either full NATO standardization or denial of Western equipment to countries where U.S. producers cannot sell. The only benefit would be the knowledge that the system supplied to these countries might be somewhat less capable than one produced under family of weapons using U.S. technology.

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Although this concept might resolve the sales issue, the relief may only be temporary. The elaborate distinctions between different objections to sales make continuous future controversy likely with no clearly identified dispute mechanism. On the positive side, agreement would allow FRG, U.S. and UK collaboration to proceed by resolving the third country sales issue at least temporarily, and puts some restrictions on British and German sales. The concept gives a special role to the major developer of a system. The U.S. readiness to adopt a more flexible third country sales policy reflects both the anticipated standardization benefits and the splitting of development responsibility in the family of weapons method.

AVOIDING THE ISSUE IN CODEVELOPMENT
AGREEMENTS: THE ERMISSE CASE

Like family of weapons, codevelopment offers real potential standardization benefits but in recent agreements, the United States deliberately avoided dealing with the sales issue altogether. This was accomplished in the ERMISSE mine-sweeping MOU by relying on the Navy's general procurement authority (10 U.S.C. 2301-2314) ^{1/} rather than treating the transfer as a sale under the AECA. Until the system is considered viable, DOD considers the sales issue a moot question. At the same time, U.S. export law does not recognize the significance of foreign funding of development--any technology developed in the United States must follow U.S. export regulations. Government-to-government agreements, on the other hand, treat codeveloped information as jointly owned with the implication that its disposition will also be jointly decided. This difference in perspective promises future difficulties in handling codeveloped exports.

^{1/} Under 10 U.S.C. 2301-2314, the Secretary of the Navy has the authority to "conduct research" and the Navy includes participation in codevelopment in that definition. Since the U.S. contribution is one-fifth of the total cost, the Navy can comply with the Bayh Amendment (P.L. 92-570, Section 744) which limits U.S. offshore procurement of R&D to cases where the cost is below U.S. cost.

In August 1978, the United States made an agreement with Great Britain and Northern Ireland, Germany, the Netherlands, and France to do common research and development work on an Explosion Resistant Multi-Influence Sweep System (ERMIS) a minesweeping vessel. The current MOU covers only initial feasibility studies on propulsion and structure of the minesweeping vessel, and future MOUs are to cover later phases which will include prototype and full production and eventually logistical and technical support. The initial phases are expected to be completed by the spring of 1981, and negotiations will begin this spring on the later phases. The participants are sharing equally the costs of Phases I and II, and each share was estimated to cost \$170,000. According to DOD officials, one contract has been awarded to a German laboratory to study explosive effects, and a second contract will be awarded on a rubber products study. A U.S. company and a French-led consortium are competing for the latter contract.

The ERMIS MOU requires that each participant grant other participants the right to buy on "fair and reasonable terms" and use for their own forces and defense sales the information developed under the program. Sales outside the consortium of ERMIS "materials or any classified information" are to be submitted to the Management Project Group where decisions will require a majority vote of the participants. This provision may be interpreted as replacing the practice requiring control of all transfers of U.S. technology with decisionmaking by a multinational committee.

Projected to be a very expensive system capable of riding waterways of mines, potential customers would include not only NATO nations but also Middle Eastern nations who want the ability to sweep the Mediterranean or other critical straits or channels. The United States has not yet made its production decision and collaborative benefits will have to be weighed against the difficulty of maintaining customary U.S. freedom to sell military weapons and to control where sophisticated equipment may later be sold.

When ERMIS moves into phases three through five, however, the Department of State will have to grant an export license to any U.S. contractor participating in the production program, and U.S. control will then have to be addressed because all manufacturing arrangements must include a provision outlining the sales territory. Therefore, using Title X authority gives only a temporary respite from dealing with the sales issue. Negotiation on the prototype phase is to begin this spring, and the sales issue will then have to be addressed since a hardware item rather than data will be produced.

Unlike production licensing arrangements where the developing nation controls the system and therefore, has the right to set the conditions for its transfer, joint development creates joint ownership and control. The United States has chosen thus far to tolerate ambiguity on sales, putting the issue off until research work demonstrates the viability of the system. Yet, this position requires participants to make investment decisions without knowing possible constraints governing their future markets. This creates the potential for significant misunderstandings among the participants as well as decreasing U.S. leverage in later negotiations.

Although Congress adopted section 27 on reporting of cooperative projects in the 1979 security assistance legislation, strictly co-development projects like ERMIS will not be reported under the Department of Defense's current interpretation of the Act. This section, enacted October 29, 1979, permits the Department of Defense to waive administrative and other charges for cooperative projects and requires that projects where the costs of development and "joint production" are shared are to be reported to the Congress 30 days before an international agreement is signed.

The Department of Defense typically negotiates collaborative agreements in phases matching the production cycle-- project definition, development, production, and logistical support. In DOD's interpretation, however, a certification on a codevelopment project would not be required unless and until agreement is reached on the final plan for joint production. Thus, congressional committees with foreign policy oversight responsibility may not be aware of strictly co-development agreements until after they are signed and reported under the Case-Zablocki Act. In a recently signed agreement involving joint funding and teaming between American and German contractors to develop a radar killing harassment drone, no certification was made because joint production, although anticipated, was not detailed in the agreement. The third country sales issue was also not settled but left open until agreement is reached on the production phase. When negotiations begin for the production phase, project momentum may put additional pressure on the United States to make third country sales concessions.

DOD's interpretation of "joint production" is also not yet clear because experience to date has been so limited. The law calls for sharing the costs of "joint production" and this could be interpreted to eliminate projects where dual production follows co-development. Or, DOD could interpret "joint production" more broadly to include any type of

coproduction with partial or complete licensing of production facilities. The Drone agreement, for example, anticipates joint production unless only one party decides to produce the system. Thus, it is not yet clear whether the agreement will eventually be sent to the Congress for review.

CHAPTER 5

CONCLUSION

THE CONFLICT OF TWO POLICIES

Increasing U.S. involvement in NATO collaborative projects has given a new importance to decisions dealing with future exports of military equipment made using U.S. technology. Setting the conditions governing these "third country sales" are critical arms sales policy decisions because this will determine what nations will receive the next generation of military equipment made by relying in part on U.S. technological contributions. Therefore, these decisions are at least if not more important than individual arms transfers.

Yet, these decisions must also take into account the potentially substantial savings in R&D and increases in military capability from collaboration. In U.S. developed systems with high visibility, the United States generally continued to closely control exports by foreign producers. France and the UK have generally not been willing to adopt U.S. systems under these conditions. Therefore, there have been limited military standardization benefits and little reduction in duplicative development from this method.

Their unwillingness stems from

- the inability of a follower to compete with the developer in the same market, and
- the existence of alternative nationally developed systems which can be exported freely.

Under the right conditions and with the right concessions, however, dual production with U.S. controls may be accepted by France and the UK, as well as the FRG. These conditions are

- limited R&D investment in comparable systems;
- assurance of a viable separate European production run by sharing the export or U.S. market;
and
- equipment oriented to the NATO theater and not associated with other major items.

To attract the participation of the UK, France, and FRG DOD has proposed codevelopment of new systems, either through

joint funding of a single project or by allocating development responsibilities between the United States and a European consortium for complementary systems, the family of weapons approach. Unlike dual production, collaboration at these earlier stages eliminates the problem of competition among nationally developed systems but creates increased security, political, and economic interdependence. To further these new forms of collaboration, the United States is lessening its control over sales by foreign producers. Therefore, a real conflict exists between two U.S. policies:

- fostering NATO standardization through collaboration; and
- retaining U.S. control over who receives equipment made using U.S. technology.

GENESIS OF THE PROBLEM

The conflict between the two policies results from

- the increased importance of arms exports to both the United States and the three major European producers (a tenfold increase in average annual orders for U.S. and FRG, and fivefold for UK and France in the 1973 to 1978 period compared to the 1954 to 1972 period) and the new importance of the Middle East market (over two-thirds of all exports for the United States, France, and UK, and about 40 percent of FRG sales are to Middle East countries);
- the difference in foreign policies between the United States, FRG, UK, and France which results in different customers considered acceptable;
- the inability of the UK, France, and FRG producers to compete successfully with the United States because of their smaller quantitative requirements, less efficient production practices, and their use of worksharing within Europe; and
- the U.S. Government's reluctance to share the U.S. acceptable market on a non-competitive basis.

This issue has come to a head in the air-to-air missile family of weapons agreement which was submitted to the Congress under section 27 of the AECA on March 22, 1980. Because France and the UK are unwilling to accept traditional U.S. sales controls, the administration has been under heavy pressure to give in to European desire for a freer hand in exports of military items which include U.S. technology.

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In the administration proposals adopted, the United States may no longer be able

--to prevent European sales of systems containing U.S. technology to countries with foreign policies contrary to U.S. policies; and

--to supply its non-NATO allies with systems containing U.S. technology if a European partner objects.

LESSENING OF U.S. CONTROLS

The lessening of U.S. controls for the sake of cooperation has been gradual with the largest concessions extracted where the potential standardization benefits and European contributions are the greatest. In the ATLAS laser designator case where U.S. technology was produced for a French firm, the State Department exceeded policy guidelines which required that sales territories be confined to NATO. The French dependence on the U.S. technological contribution and U.S. desire for collaboration required both sides to compromise--the French accepted a smaller and the United States a larger sales territory than desired.

In the Roland missile case where the United States made improvements to a French-German developed system, DOD is proposing that European exports incorporating noncritical U.S. technology be exported without controls over future recipients. As the major developer, the French are likely to be less willing to accept U.S. restrictions on exports. As proposed, the system

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must get both State Department and then French and German concurrence in this proposal.

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Finally, in a cooperative feasibility agreement on the ERMIS minesweeping system, the United States put off the final decision on controlling future hardware exports, agreeing to decisionmaking by majority vote on sales of technical data. This agreement may create a precedent for sales of the equipment itself.

LIMITED CONGRESSIONAL PREROGATIVES

Under the present law, the Congress has disapproval rights over third country transfers of systems made with U.S. technology if U.S. Government military sales (FMS) channels are used. For commercial licensing transactions, the present law provides no explicit guidance to the State Department in establishing what the United States considers acceptable sales territories for foreign producers using U.S. technology in their systems. There is no congressional right to disapprove the transfer of technology through commercial licensing and most, if not all, technology is likely to be transferred through these channels. If the State Department chose, it could define a sales territory to include the entire non-Communist world and could sanction any export of U.S. critical or noncritical technology. The Congress is informed of but has no right of disapproval over commercial licensing agreements and, therefore, does not rule on the appropriateness of sales territories proposed by companies and approved by the State Department in export licenses.

This inconsistency in the current law enabled the administration to make the current family of weapons government-to-government agreement based on the threshold concept. The

law currently allows the administration to make agreements allowing open-ended transfers of U.S. technology because commercial implementation of the agreement is anticipated. Although the Congress received a certification on the ASRAAM/AMRAAM agreement, it could not disapprove the agreement itself. Congressional ability to act as a check is limited because the legislation is not designed to deal with the new forms of collaboration. The Congress will be consulted but cannot disapprove the agreement or any future agreement allowing less restricted transfers of U.S. technology.

WAYS TO UPGRADE CONGRESSIONAL PREROGATIVES

Because committees of the Congress have recently expressed concern over the transfer of U.S. technology embedded in collaboratively developed projects, the Congress may want to consider the following actions:

1. Amend the Arms Export Control Act (AECA) to require that all government-to-government collaborative agreements be submitted to the Congress and include a provision explicitly defining the third-country sales prerogatives of the participants. This would ensure that codevelopment agreements are submitted to the Congress, and that rules on future exports are established before the stakes in collaboration were raised. DOD could not then put off the third-country sales issue until the production stage. An early decision on handling future sales would be required, and the Congress would be made aware of all early efforts at collaboration.
2. Give the Congress a right of disapproval over all sales territories beyond NATO for all government-to-government agreements whether implementation is through FMS or commercial channels. Third party transfers through commercial channels could be put under the same controls with the same congressional right of disapproval. This could be done by including commercial transfers in Sections 3(a) and (d) AECA. This would have stopped the ASRAAM/AMRAAM threshold

agreement because individual recipients of U.S. technology would have to be identified, and congressional decisionmaking prerogatives would be expanded. 1/

3. Put all government-to-government agreements under the same controls as FMS, even if agreements are to be implemented commercially, but add a new mechanism to allow transfer of technology without identifying the recipient. The Congress could give the administration the authority to transfer noncritical technology but could require that the Secretary of Defense submit to the Congress the criteria for deciding what was noncritical technology for review and/or disapproval. This would allow for an export version but not for a threshold agreement. 2/

4. The Congress could require that the administration submit certification on transfers of technology for NATO collaborative projects where the recipient is not identified. The certification could include information on

--the type of technology;

--its contribution to the system's capability;

--the technology's availability from other sources;

1/The International Security and Development Cooperation Act of 1980, signed into law on December 16, 1980, (Public Law 96-533), amends section 3(d) of AECA to require that if a defense article meets or exceeds a certain dollar threshold and is proposed to be transferred to a third country through commercial channels, the President must transmit to the Congress a report at least 30 days before he intends to consent to the transfer. Commercial third party transfers are not subject, however, to a congressional right of disapproval and thus are still not controlled to the same extent as are FMS third party transfers.

2/Public Law 96-533, December 16, 1980, amends section 36(c), AECA by providing that Congress may veto by concurrent resolution commercial arms sales meeting or exceeding the dollar threshold. Commercial arms sales or exports to NATO, NATO countries, Australia, New Zealand, and Japan are exempt from the legislative veto requirements, but still have to comply with section 36(c) reporting requirements.

--the impact of a denial on the collaborative project; and

--prospective customers.

This certification could be subject to either congressional review and/or a 30 or 60 day right of disapproval. The Congress could determine on a system-by-system basis whether the type of transfer was appropriate without the recipient being identified. The Congress would have a one-time review right over the individual system. Both threshold and export version types of agreements would be possible unless the Congress disapproved.

This would require modifications of current law governing third-country transfers to establish separate criteria for NATO collaborative projects. More importantly, it would establish one set of rules governing these third-country transfers. While the Congress would gain a right of disapproval over all technology transfers in collaborative projects (commercial as well as FMS), the executive branch would have the option of making more broadly structured agreements on export sales in NATO collaborative programs. The nature of the agreement, rather than the implementation method, would determine congressional and executive review rights.

5. The Congress could couple these enhanced controls with a new negotiating tool to give the Secretary of Defense greater flexibility in handling the third country sales issue while retaining U.S. controls. The tool proposed is a right to share third country markets including FMS transactions with European participants. This would require changes in section 42 of AECA which prohibits procurement for foreign military sales outside the United States if there are adverse effects on U.S. economy or industrial base.

CHAPTER 6

AGENCY COMMENTS

Both the Departments of State and Defense considered our description of the policy conflict between fostering NATO arms collaboration and controlling third country transfers generally accurate. In their view, however, the report:

- fails to adequately take into account the benefits of NATO collaboration;
- proposes legislative changes which would decrease executive branch flexibility by expanding the congressional role without improving the quality of the decisionmaking process or harmonizing the policy conflict;
- proposes specific additional controls over commercial exports which they do not consider necessary given executive branch willingness to consult with the Congress; and
- fails to propose solutions to the policy conflict.

These criticisms essentially spring from their concern about maintaining maximum executive branch flexibility in negotiating new types of collaborative arrangements with U.S. allies which may well also include new ways to deal with the difficult third-country sales issue.

U.S. STAKE IN COLLABORATION

We do not underestimate the importance of the goal of standardization. The first chapters of the report--the analysis of differences in arms sales trading patterns and the assessment of European producers' problems in competition--are designed to show the reality and depth of the conflict and the difficulty of the policy choices involved. In the early stages of the review, we attempted to get information on standardization benefits of particular projects--in R&D dollars saved or military capability increased. We could find no analysis of the R&D budgets of the major European producers so that it would be possible to determine the areas of greatest duplication and hence, the areas requiring standardization the most. In fact, no breakdown of UK, French, or FRG's R&D budget by project was available. We also looked for projections of the military advantages of standardizing particular types of weapon systems, but found only one Army

study on the advantages of having interoperable ammunition which concluded that having sufficient stocks was more important than interoperability.

Nevertheless, we believe that the goal of collaboration is intuitively reasonable, i.e., the less duplication the greater the savings, and the greater the interoperability the higher the military capability. Moreover, the payoff for standardization may well be in the long-term if common logistical arrangements can be made to save operational expenditures over a weapon system's lifetime. Since the benefits of collaboration depend on long-term effects, it is not reasonable to expect quick dividends. For that reason, any attempt to balance off the benefits at this time in arms restraint terms with the benefits of collaboration would be difficult if not impossible to do.

The Departments of State and Defense also suggested that the study did not adequately discuss weapon systems which could be candidates for standardization, but have not been accepted because of a U.S. refusal to approve sales in advance. Our follow-up with DOD and State officials identified two cases,

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and the M-735 ammunition case which ultimately was rejected by the French. In the latter case, issues other than third country sales contributed to the French rejection. While third country sales issues often contribute to the failure to reach collaborative agreements, other issues such as harmonization of requirements, viability of separate production lines, unwillingness of the United States to guarantee U.S. purchases and offsets, and the technological positions of the potential partners also determine if collaboration would take place.

We believe additional cases would only further support the seriousness and extent of the policy conflict and the need to seek workable and acceptable solutions.

IS GREATER CONGRESSIONAL PARTICIPATION APPROPRIATE?

According to the Department of Defense, the judgments on the tradeoffs between arms constraint and arms collaboration are the essence of executive branch decisionmaking in foreign and national security affairs. In their view, these judgments cannot be enhanced by legislation which further reduces executive branch flexibility.

The Department of Defense conclusion that the various legislative alternatives would reduce executive branch ability to negotiate and reach agreement on other families of weapons agreements is partially correct. This will occur if the Congress adopts legislation which requires the executive branch to identify potential recipients in commercial third country transfers because this would limit future sales of items containing U.S. technology to countries where the United States is willing to make the same sale. However, DOD did not address the range of controls put forth. For example, one proposed alternative would permit both export versions and threshold approaches but would give the Congress a one-time disapproval right.

DOD expressed the view that if we believe more congressional involvement is necessary, then our reasons for this should be spelled out. In developing various alternatives for increased congressional concern, the reasons which led us to offer these alternatives include:

- The existing level of executive branch flexibility creates uncertainty as to where the line will be drawn on further relaxation of U.S. controls over technology for the sake of collaboration.
- The Congress has endorsed both policies and may want to participate in the reconciliation of those policies now in conflict.
- There is a need to establish one set of rules governing the transfer of technology for collaborative projects based on the importance of the agreements rather than on the method of implementation which currently sets both the extent of congressional prerogative and executive branch flexibility.
- Executive branch consultation, at best, is uneven.

ADEQUACY OF CONSULTATION WITH THE CONGRESS

The Departments of State and Defense emphasized the amount of consultation taking place with appropriate and often sympathetic committees on DOD plans and programs. The family of weapons and the M-735 ammunition agreements were given as illustrations supporting the extent of consultation taking place.

The degree of executive branch consultation on collaborative projects has been uneven. The consultation appears to correlate with the amount of congressional prerogatives available to review agreements. In the M-735 ammunition case, the Congress had the right to veto the agreement by a concurrent resolution because it fell under FMS provisions of the AECA. As indicated in the report, appropriate congressional committees participated in the shaping of the third country sales provision.

In the family of weapons agreement, the Congress had to receive a certification containing information 30 days before the signing of the agreement under section 27 of the Arms Export Control Act.

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Also, we were advised that the provision was not discussed in executive branch briefings with the committees. Prior consultation was also very limited.

The May 1980 Senate Committee report on the International Security and Development Cooperation Act of 1980 puts the issue into perspective.

"The Committee is concerned that in negotiating such projects, the Administration may relinquish adequate U.S. control over the subsequent retransfer to non-NATO countries of U.S. defense articles containing particularly sensitive U.S. technology. The Committee does not wish to create disincentives for NATO RSI [Rationalization Standardization, and Interoperability] projects and generally supports such projects, but it does believe that adequate U.S. control over defense articles containing such technology should be retained."
(Underscoring added.)

In our view, the amount of consultation to be expected from DOD on collaborative projects in the future may be limited. For example, in a recent agreement between the Federal Republic of Germany and the United States to jointly develop a drone that kills radars, the Department of Defense interpreted section 27 as not applying because both joint development and production were not covered in the agreement. The appropriate committees were therefore not consulted on the agreement before it was signed.

If the Congress is satisfied with the amount and timing of consultation already taking place, it could exempt family of weapons agreements which do not identify potential recipients from either the FMS or the commercial provisions of the Arms Export Control Act. This would maximize the executive branch's flexibility. Ultimately, congressional judgment about the adequacy of executive consultation and contents of the agreements will determine whether legislative changes take place.

TIMING IN ADDRESSING THIRD
COUNTRY SALES ISSUE

The Department of Defense also contends that requiring the third country sales issue to be dealt with at the development stage would stymie efforts at collaboration. This position is not supported by recent history--the ASRAAM/AMRAAM family-of-weapons agreement includes provisions on handling third country sales as does the MLRS agreement (where development is still underway); and the Rolling Airframe missile agreement (which involves some additional development). The rationale for dealing with the third country sales issue at the development stage is to (1) give all participants a reasonable knowledge of the markets mutually acceptable to the participants, and (2) prevent the third country sales issue from being subject to intense pressure because development has been completed and production is in sight. Production arrangements can be made independent of the rules which are to apply to third country sales decisionmaking.

THE NEED FOR ALTERNATIVE SOLUTIONS

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The open-ended waiver is

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This approach apparently was unacceptable to the executive branch. Thus, there are some limits on how much control of third country sales the administration is willing to give up for the sake of NATO standardization. Also, in the family of weapons agreement,

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Another illustration of the executive branch's establishing boundaries on its willingness to grant concessions for the sake of collaboration is the May 1978 DOD decision to limit the use of F-16 type offset agreements because of the economic penalties associated with this approach. This decision removes one alternative for harmonizing the third country sales issue and standardization goals.

Guaranteed U.S. purchases from a European source remains another alternative, but a major buy is unlikely to find support because of the possible negative impact on U.S. national mobilization base, the principle of competitive procurement, U.S. exports, and employment. The defense industry would likely be intensely opposed to this alternative.

As the report shows, European requirements and production methods generally will make European sources non-competitive with U.S. sources.

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The DOD apparently accepts some of these arguments. For example,

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It appears that solutions will have to be developed on a system-by-system basis and most likely will have to involve concessions on U.S. control of U.S. technology and guaranteed purchases by the United States. If neither of these concessions are acceptable to the executive branch or the Congress, widescale collaboration with the three major European producers is doubtful.

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May 30, 1980

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International Division
U.S. General Accounting Office
Washington, D.C.

Dear Mr. Fasick:

I am replying to your letter of April 28, 1980, which forwarded copies of the draft report: "No Easy Choices--NATO Collaboration and the Arms Export Sales Issue."

The enclosed comments on this report were prepared by the Deputy Assistant Secretary for European Affairs.

We appreciate having had the opportunity to comment on the draft report. If I may be of further assistance, I trust you will let me know.

Sincerely,

A handwritten signature in cursive script that reads "Roger B. Feldman".

Roger B. Feldman

Enclosure:
As Stated

GAO DRAFT REPORT: "NO EASY CHOICES--NATO
COLLABORATION AND THE ARMS EXPORT SALES ISSUE"

We have reviewed the draft of the proposed report, "No Easy Choices -- NATO Collaboration and the Arms Exports Sales Issue." We appreciate the efforts of your staff to define the problem and explain the issues surrounding the dilemma we face.

For the most part, the report accurately describes the circumstances regarding the balancing of our two policies -- (1) improved NATO arms cooperation (that is, rationalization, standardization and interoperability (RSI), waiving "buy national" requirements, and licensed coproduction of US and European-developed or codeveloped defense items by other NATO countries), and (2) current legislative and executive branch requirements that we closely monitor and control transfers to third-parties of US-origin equipment or foreign-produced equipment based on US technology. This latter policy discourages European participation in US projects because the strict US controls reduce the potential third-country sales the Europeans see as essential to the economic viability of their domestic defense industries and to their political influence in the Third World.

While the report does not purport to propose solutions, it does suggest certain steps Congress may wish to take, none of which we believe would contribute to harmonizing the policy dilemma, but which in fact could further discourage trans-Atlantic NATO arms cooperation. The report also omits certain important aspects of the problem.

As you know, it is US policy, supported by the Congress, to further rationalization, standardization and interoperability (RSI) within NATO by developing common assessments of the threat in Europe, an integrated tactical and strategic response, and common determinations of the weapons and other significant defense articles needed. In attempting to preserve economies of scale as an immediate benefit of NATO arms cooperation the US has encouraged the European NATO partners to participate in arms cooperation by offering several different approaches which rely on licensing, coproduction, and the strengthening of defense industries on both sides of the Atlantic.

In furtherance of our goals, we have consulted with Congress on recent NATO arms cooperative projects, especially concerning third country sales aspects. Our objective in these

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consultations is to explain how the Executive Branch exercises its responsibility to promote both US and allied security, promote defense industry effectiveness, and control and where appropriate, restrain the flow of US weapons and technology which might contribute to regional instability or lead to war. We believe that, as a result of recent consultations, the Congress has been sympathetic to our efforts to balance the competing policies described earlier. The M-735 tank gun ammunition agreement was concluded after consultations with several committees concerning the countries to whom the European producer can sell the system. Additionally, we have recently reached agreement with the British and Germans over the third-country sales terms for the short-range and medium-range air-to-air missile family of weapons after preliminary consultations with sympathetic Congressional committees.

Having said this, we offer the following comments in an effort to assist the GAO to present a document of value to both the Executive and Congressional branches:

1. The study assumes that there is a need for tighter Congressional controls over the Executive Branch exercise of policy on arms exports and technology transfer, especially regarding commercial exports -- controls going beyond current legislation.
2. Only passing mention is made in the study of the support from the Congress for NATO arms cooperation and the standardization and interoperability goals mandated in the Culver-Nunn Amendment and other legislation. The bulk of the report is weighted toward a goal of third-country transfer restraint.
3. The report addresses US third-party transfer restraints as a singularly important goal and fails to note that if no arms collaboration agreements were reached with the Europeans, then our Allies would be completely free to develop and sell their own systems whenever and wherever they desired. With arms cooperation, the US will have some degree of control over the flow of weapons to third countries while saving hundreds of millions of dollars of scarce Alliance research and development funds.
4. We suggest the study take more into account the changing world situation and the requirement for governments, including the US, to retain flexibility in their policies. NATO arms cooperation, which is only now beginning to mature is one example of evolving policy. New developments often require imaginative, innovative approaches to alliance relations in order to accommodate the desires of all the sovereign nations involved. We believe that the US and its NATO allies can meet our mutual security goals.

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5. Finally the study fails to address a number of highly relevant issues:

-- Potential RSI project candidates, which have not been accepted because of US refusal to approve a sales territory in advance.

-- The expense of R&D duplication and codevelopment/ coproduction projects lost due to US third country transfer restrictions.

-- The differences between those sales territories agreed to among commercial firms and those "sales territories" (i.e., countries to whom sales would be licensed or permitted) granted by the USG and the effect on potential RSI efforts.

We request you incorporate our views into your study. We are prepared to meet with your staff as you continue to refine it.



H. Allen Holmes
Deputy Assistant Secretary for
European Affairs

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E R R A T A

To the recipients of the Comptroller General's report to the Congress entitled "No Easy Choice: NATO Collaboration And The U.S. Arms Export Control Issue" (ID-81-18):

The letter to the President of the Senate and the Speaker of the House of Representatives, paragraph 1, line 3, the publication number "C-ID-80-43" should read "C-ID-80-4."





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