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# AICGS POLICY REPORT

THE BENEFITS OF REVIVING  
TRANSATLANTIC ARMAMENTS  
COOPERATION: GERMAN AND  
AMERICAN PERSPECTIVES

Alexander Ritzmann



AT JOHNS HOPKINS UNIVERSITY

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## FOREWORD

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The relationship between Germany and the United States was transformed after the end of the Cold War. In the absence of a common enemy to create a unique strategic framework, the transatlantic partnership took somewhat of a back seat to other pressing problems such as EU enlargement and the fight against terrorism. The shift in domestic and foreign policy priorities impacted many policy fields and industries, among them the defense industry. During the Cold War, Germany and the U.S., as close NATO allies, fostered close arms cooperation and development. Yet, after German unification, Germany focused on developing and procuring armament systems either domestically or within the EU.

However, as Alexander Ritzmann argues in this Policy Report, German-American defense cooperation could once again become an area in which transatlantic cooperation helps to overcome challenges. The German defense industry is facing a crisis as budget cuts and the transformation of the German Bundeswehr threaten to diminish the importance of its most important customer. Purchases by the Bundeswehr not only sustain the German defense industry, they also serve as an important benchmark for other potential customers as to the quality of a product. To protect jobs and protect the German defense industry, new markets have to be opened. Cooperation between the American and German defense industries could become the key to accomplish that. The U.S. defense industry will also have to confront a stagnating U.S. budget. When coupled with the desire of the Obama administration to increase U.S. exports, transatlantic cooperation becomes increasingly attractive to the U.S. defense industry. Mr. Ritzmann, AICGS Senior Fellow and Political Analyst and Senior Fellow with the European Foundation for Democracy, gives concrete policy recommendations to the U.S. and German governments to increase transatlantic defense cooperation. He also briefly outlines what has led to the current lack of cooperation and focuses in this Policy Report on how to overcome it. This Policy Report adds an important dimension not only to the AICGS Business & Economics Program but also the AICGS Foreign & Domestic Policy Program. In the aftermath of the NATO summit 2010 in Lisbon, AICGS hopes that this Policy Report can impact the debate on how to move transatlantic defense cooperation forward.

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Jack Janes  
Executive Director



## ABOUT THE AUTHOR

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# 01

INTRODUCTION

## INTRODUCTION

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The relationship between the United States and Germany throughout the Cold War was extremely close and Germany was one of the U.S.' key NATO allies. The shared threat perception from the Soviet Union had established a strategic consensus and fostered various kinds of cooperation, including common arms developments. Since the mid 1990s, however, Germany has focused solely on the domestic or intra-European Union procurement of weapons systems. Yet, as European defense budgets continue to shrink, including in Germany, the need to rethink this strategy of the German government to avoid a major loss of jobs and technology capabilities becomes more and more pressing.

The challenges for the U.S. and its defense industry are different. The goal of increasing exports, as outlined by the U.S. administration, also includes the export of weapons systems. If this will be successful depends, first, on the U.S. government's ability to reform its export control regime. Second, the U.S. will need to increase competition to reduce costs in an era of tightened spending. Finally, the U.S.' objective of including the best possible technology in its weapons systems makes it open to increased cooperation in the defense industry.

While defense industry cooperation between the European Union and the United States, as well as the creation of the European defense institutions and policies, have been an area of interest and research over the past ten years, German-U.S. defense industry cooperation has rarely been addressed. The few existing studies mostly focus on the historical perspective, describing Germany as turning away from the U.S. as its major partner and moving toward the EU. Thus, the aim of this Policy Report is twofold: First, it will give an overview about the status quo of

German-U.S. defense industry cooperation. Second, it will investigate whether enhanced German-U.S. armaments cooperation would be beneficial for both nations.

### Germany

Germany's armed forces, the Bundeswehr, and the German defense industrial base are facing turbulent times. Driven by financial motives, the federal government does not only want to change some details of the status quo, but, as some analysts argue, wants to change the nature of the game. Twenty years after the end of the Cold War and the ensuing realignment of the security framework of Europe and the world, the structure of the Bundeswehr is undergoing a transformative change in order to better cope with its current and future missions. The foreseeable end to conscription, the downsizing, and budget cuts will all have a significant effect on Germany's defense industry.

There are currently about 80,000 highly-skilled jobs in the German defense industry, not counting supply firms. The German defense market remains highly fragmented, with thirty-two individual companies having prime contractor responsibility for the sixty-three top German procurement programs. While three companies—EADS, Eurofighter, and ThyssenKrupp—account for almost 55 percent of the total market by value, the remaining 45 percent is contested by twenty-nine different companies, none of which has more than 7 percent market share. This degree of fragmentation at the prime contractor level casts doubt on the long-term viability of the German defense industry absent real consolidation and reform.<sup>1</sup>

Until today, the Bundeswehr is the German defense industry's most important customer. Since the armaments market lacks the incentives and penalties of a regular market, the relationship of the defense industry to its main client is more comparable to that between a child and a father. For almost two decades now, father state has given mixed signals of what he wants the industry to do.

As recently as 2006, the German Ministry of Defense (Bundesverteidigungsministerium) issued a white paper declaring that Germany needs to maintain "indigenous defense technology capabilities in order to co-shape the European integration process in the armaments sector."<sup>2</sup> One year later, the Ministry of Defense signed a "Joint Declaration" with the German defense industry, in which the government implied that it would provide for "National Key Defense Technology Capabilities."<sup>3</sup> As all these papers were negotiated and signed, the defense budget was shrinking further.

In 2010, Minister of Defense Karl-Theodor zu Guttenberg said that Germany's defense budget will be cut even more and that the rules of defense procurement will drastically change. Current plans show a reduction of €8.3 billion within the next five years. But not just Germany; France, Great Britain, Spain, Greece, and many other EU member states are also reducing defense spending as part of their austerity programs to reduce public budget deficits in the wake of the global recession. As Germany's defense industry is largely export-driven, as will be discussed in this Report, these budget cuts will have a direct impact on this sector. More than 30,000 jobs are at risk<sup>4</sup> as well as the loss of core technological competencies.

## United States

The situation in the United States could not be more different. After the attacks of September 11, 2001, the defense budget rose drastically. This created, in combination with an aggressive and protective industrial policy, a financially healthy and powerful U.S. arms industry. As the U.S. industry has consolidated, however, the advantages of competition—in pricing, technological innovations, and timing—are slowly decreasing. Furthermore, as the U.S. budget deficit

and debt-to-GDP ratio sky rockets, future defense budgets will come under increased pressure. The enormous U.S. current account deficit and its unsustainability also force the U.S. to increase its exports. As a result, President Barack Obama announced his export initiative in which he plans to double U.S. exports by 2015. The U.S. defense industry is a likely target to increase its exports—but in order to be able to do so, the U.S. administration as well as U.S. industry are looking for new partners and business opportunities abroad.

This Policy Report aims to contribute to the debate on how the German defense industry can survive the upcoming existential crisis resulting from drastic cuts in defense spending in Europe. It will first offer an Executive Summary and policy recommendations for both the U.S. and German governments. A discussion presenting the rationale for these recommendations will follow. Since context is relevant, a brief overview over the history and status quo of the German-U.S. armaments cooperation, including Germany's entanglement in the EU defense market, will be given. The Report will then discuss whether increased and competitive transatlantic options for defense equipment could be part of the answer on both sides of the Atlantic.

This Report offers a perspective for Germany outside of the (EU) box, questioning some positions that are considered politically sacred. The worsening crisis in Europe in terms of military capabilities and defense spending, however, makes rethinking the "now" a necessary condition for the future.

The views presented in this Policy Report greatly benefited from more than thirty interviews and background conversations from June to October 2010 with representatives from German and U.S. defense companies, members and staffers of the Bundestag and the U.S. Congress, experts in defense-industrial affairs, and government officials who hold positions with relevance to the examined questions. Many have spoken candidly on the basis that their comments would be protected, which is why this paper does not include any direct references to these conversations.

It should also be noted that the recent and comprehensive study "Fortresses and Icebergs: The

Evolution of the Transatlantic Defense Market and the Implications for U.S. National Security Policy,"<sup>5</sup> by Jeffrey Bialos, served as an important source for this report.

## EXECUTIVE SUMMARY

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■ Defense cooperation with the U.S. on the governmental level is comprised of various aspects. One such example is the development of missile systems. Additionally, several research and development projects exist, such as alternatives to cluster ammunition, and several “declarations of principles” to reduce impediments to closer defense cooperation. Furthermore, German and American companies are mainly active in delivering subsystems and components.

■ The difference between the German and the American defense industries are significant. In the U.S. a thorough consolidation in the 1990s led to competitive structures that, together with an aggressive industry policy and the greatly increased defense budget from 2001 to 2009, led to a financially sound and strong defense industry.

■ In several areas, Germany has a technological edge and is able to compete internationally (submarines, heavy land systems, missiles, small weapons, and ammunition). Germany is the third largest armaments exporter with a global market share of 11 percent. However, a large potential to consolidate remains. Additionally, the German and European defense budgets have stagnated or decreased for years.

■ Experts consider the foci of the two defense industries—mainly domestic focus for the U.S. and almost exclusively on Germany and Europe for German industry—as unsustainable. The American defense budget will most likely stagnate in the coming years; the European budgets will continue to decrease. The fragmented European defense industry will be increasingly unable to finance elaborate technological developments and be internationally competitive.

■ The Obama administration has taken concrete steps to ease export of armament systems to increase American exports, as pressured by the U.S. defense industry. However, because the ITAR export control system is rather complex, no short-term changes can be expected. \$100 billion are supposed to be “saved” by reducing costs in the defense budget (the defense budget in 2009 was \$637 billion), but these savings are going to be reinvested in the defense budget.

■ The framework for the German defense industry will continue to become more and more problematic in the coming years. The German government is focused on the transformation of the Bundeswehr and would like to save €8.3 billion (the defense budget in 2009 was €31.1 billion). The declaration between the German defense industry and the German government to preserve its “essential national defense capabilities” is not backed by budgetary means. The Federal Minister of Defense, zu Guttenberg, called the procurement agreements with the defense industry “grotesque” and has announced new procurement procedures.

■ The German defense industry has doubled its share of the worldwide armaments market in the last ten years. However, the main customers were EU member states while Turkey, Greece, and South Africa were the largest single country customers. Turkey, who has been a significant customer by purchasing the Leopard 1 and 2 tanks, is currently developing its own tank with support from South Korea. Greece, who was a major customer of submarines, is experiencing a severe budget crisis. France will cut its defense budget by up to €5 billion by 2014. Great Britain is reducing its defense budget by 8 percent. Spain will most likely not order German products in the near future because of financial

reasons.

■ The defense ministry is currently scrutinizing already ordered purchases by the Bundeswehr, such as 405 Puma tanks at KMW and Rheinmetall, for €3 billion and sixty A400M aircraft for €9.25 billion at EADS. The German defense industry is afraid a withdrawal by the Bundeswehr would mean the loss of an important customer providing references to other potential customers.

■ Germany has pursued a “Europe first” strategy in the last fifteen years. Almost all significant defense-related development and procurement projects were, if not domestically possible, done within the EU (A400M, Eurofighter, Eurocopter Tiger). The sole exception is the Medium Extended Air Defense System (MEADS), which is developed together with the U.S. and Italy. MEADS is usually regarded as a positive example of technology sharing.

■ Whereas the U.S. industry tries to gain new or increase shares in old markets, Germany is intent on developing a strategy to prevent the slow starvation of its industry. The defense industry is characterized by highly specialized middle size businesses. Thirty thousand jobs are in danger and technological core competencies are at risk.

■ Defense budgets will increase primarily in Brazil, some countries of Northern Africa, and in the Gulf region. German companies are competing with French, British, Swedish, American, and Russian companies in these regions. These companies are often substantially supported by their own governments. The German industry would like to see more support from the German government.

The long-term success of the defense industry on both sides of the Atlantic is primarily dependent on the development of new technologies and capacities. The R&D component of the German defense budget is €1 billion in 2010 while the U.S. is investing \$45 billion. MEADS is currently the only transatlantic program with a significant R&D component. Defense conversations are regularly held between the U.S. military branches and the German defense ministry. The following areas have small cooperation agreements on research or the desire to pursue such cooperation:

- Image Processing for Weapons with HMI
- High Power Laser Technology
- UAS/UAV Air Traffic Management/Sense and Avoid for UAVs
- High Speed Penetrating Casings/Hard Target Penetration
- Teaming up for IED Detection
- Alternative Energy Sources/Bio Energy/Bio Fuels
- Military Camp Management /Resources Management/Waste Management

In order to maintain the core of the German defense industry, the federal government should put the current “Europe first” strategy into perspective. The transatlantic defense cooperation should be revived and be equal to the European strategy. Great Britain has successfully shown that cooperation both with Europe and with the U.S. is not mutually exclusive. France has already recognized that French-American defense cooperation is in its national interest within the European framework and parts of the French defense industry are currently investing heavily in developing transatlantic business deals.

If German-American defense cooperation is revitalized, both sides would profit:

The U.S. would be able to stimulate competition further and decrease costs by cooperating with German companies. Additionally, American companies would have easier access to German defense technology. Defense minister zu Guttenberg has already announced a heavier reliance on international “off-the-shelf” products.

For German companies, the U.S. market would be the necessary addition to the European defense market. In addition to being more involved in U.S. projects, German companies could profit from having the U.S. as a reference for future customers. The volume of Eurocopters sales has multiplied after the U.S. Army bought the UH 72-Lakota. Furthermore, access to markets such as India and Brazil would be easier if this is attempted with an American partner.

Especially in light of the recent financial crisis it is important for the export-driven German defense industry to be more independent from volatile exchange rates. It thus makes sense to have some of the creation of value take place in the dollar area as to denominate some of the costs in dollars and not in euros and thus the expenses and profits are denominated in the same currency and currency flows are minimized.

The U.S. is interested in cooperating with Germany, but it has a multitude of partners to choose from. Germany must be proactive and point out where areas of cooperation, such as sales/procurement or joint research and development, could be beneficial.

The opening of the U.S. market has to be coupled with long-term investments and cooperation agreements. The German defense industry, characterized by mid-size businesses, needs more political support to do so. However, cooperation should be substantial and should not be pursued just for cooperation's sake. Cooperation should be based on joint military requirements and needs as well as technical capabilities of the project partners.

## Policy Recommendations

### TO THE GERMAN GOVERNMENT:

1. The federal government should identify industries that support key strategic military capabilities. By definition the number of strategic industries should be realistic, i.e., on a very small scale and fully supported by the defense budget. Areas not deemed to be strategic should be open to competition, with a focus on German-U.S. cooperation when suitable.
2. The federal government and representatives of the German defense industry should establish a high-level working group, with a mandate for six months, to identify the specific areas for German-U.S. armaments cooperation and to develop a strategic concept. Enhancing areas of existing cooperation could be a practical first step.
3. The support received by the German defense industry from the German Embassy in Washington, DC is already helpful but should be expanded significantly. Mid-scale businesses are especially in need of support and guidance in navigating the political and industrial landscape in the U.S., as well as practical support in lobbying.

### TO THE U.S. GOVERNMENT:

1. At the Pentagon, a senior official should act as coordinator and contact person for international defense cooperation. Currently the four branches of the U.S. Armed Forces operate and negotiate largely autonomously on development and procurement issues, while within the Pentagon the responsibility of coordination is split between the Offices for Acquisition and Policy.
2. The U.S. should increase the activities of the Office of Defense Cooperation<sup>6</sup> by offering to consult the German Ministry of Defense directly on available U.S. products, to support U.S.-German armaments cooperation in general, and to counsel U.S. companies regarding business in Germany.

## ZUSAMMENFASSUNG DER STUDIENERGEBNISSE

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- Rüstungskooperationen mit den USA bestehen auf Regierungsebene beispielsweise im Hinblick auf Flugkörper- und Raketenvorhaben. Zudem gibt es einige Forschungs- und Entwicklungsprojekte, so zum Thema Streumunitionsalternativen und verschiedene Absichtserklärungen (*Declaration of Principles*), um Hindernisse bei der Rüstungskooperation abzubauen. Darüber hinaus sind deutsche wie amerikanische Unternehmen hauptsächlich als Lieferanten von Subsystemen und Komponenten aktiv.
- Die Unterschiede zwischen der deutschen und der amerikanischen Rüstungsindustrie sind signifikant. In den USA führte eine umfassende Konsolidierung in den 90er Jahren zu wettbewerbsfähigen Strukturen, die in Kombination mit einer offensiven Industriepolitik und den von 2001 bis 2009 massiv gestiegenen Verteidigungsbudgets eine finanziell gesunde und leistungsstarke Rüstungsindustrie schufen.
- Deutschland ist in einigen Bereichen technologisch sehr gut aufgestellt und international wettbewerbsfähig (U-Boote, schwere Landsysteme, Lenkflugkörper, Kleinwaffen, und Munition) und drittgrößter Rüstungsexporteur (11% Weltmarktanteil 2005-2009). Andererseits bestehen noch erhebliche Konsolidierungspotenziale. Zudem stagnieren bzw. sinken die deutschen und europäischen Verteidigungsbudgets seit Jahren.
- Die hauptsächlich nationale Ausrichtung der US-Industrie und der fast ausschließlich deutsch-europäische Fokus der deutschen Industrie werden von allen Beteiligten als nicht zukunftsfähig betrachtet. Die amerikanischen Verteidigungsausgaben werden in den nächsten Jahren voraussichtlich stagnieren, in Europa weiter sinken. Die zersplitterte und kleinteilige europäische Rüstungsindustrie wird zunehmend weniger in der Lage sein, aufwendige technologische Entwicklungen zu finanzieren und international wettbewerbsfähig zu sein.
- Die Regierung Obama hat auf starkes Drängen der US-Verteidigungsindustrie und zur Erhöhung der Exportquote konkrete Schritte zur Erleichterung von Rüstungsexporten unternommen. Aufgrund der Komplexität des ITAR-Kontrollsystems sind jedoch keine signifikanten kurzfristigen Veränderungen zu erwarten. In den nächsten fünf Jahren sollen Einsparungen von insgesamt 100 Mrd. US \$ (Verteidigungsbudget 2009: 637 Mrd. US \$) durch Kostenreduzierungen erbracht werden. Diese werden dem Verteidigungshaushalt jedoch wieder zugeführt.
- Die Rahmenbedingungen für die deutsche Rüstungsindustrie werden sich in den kommenden Jahren weiter verschlechtern. Die Bundesregierung konzentriert sich gegenwärtig auf den Umbau der Bundeswehr mit dem Ziel, in den nächsten vier Jahren 8,3 Mrd. € (Verteidigungsbudget 2009: 31,1 Mrd. €) einzusparen. Die 2007 geschlossene Vereinbarung zwischen der Deutschen Industrie und der Bundesregierung über den Erhalt der „unverzichtbaren nationalen wehrtechnischen Kernfähigkeiten“ ist nicht durch Haushaltsmittel gedeckt. Bundesverteidigungsminister zu Guttenberg hat sich über „groteske“ Rüstungsverträge beklagt und eine neue Gangart in der Beschaffungspolitik angekündigt.
- Die deutsche Verteidigungsindustrie hat ihren Anteil am weltweiten Rüstungsexport in den letzten zehn Jahren zwar verdoppelt. Die Hauptabnehmer waren jedoch EU-Mitgliedsstaaten, die größten Einzelkunden insgesamt die Türkei, Griechenland und

Südafrika. Die Türkei, bisher Großkunde durch Kauf des Kampfpanzers Leopard 1 und 2, entwickelt gegenwärtig einen eigenen schweren Kampfpanzer mit der Unterstützung Südkoreas. Griechenland als Großkunde bei U-Booten hat erhebliche Haushalts- und Zahlungsprobleme. Frankreich wird sein Rüstungsbudget bis zum Jahr 2014 um bis zu €5 Mrd. kürzen. Die Briten reduzieren ihren Wehretat um 8%. Spanien wird voraussichtlich aus finanziellen Gründen auf absehbare Zeit kaum mehr deutsche Produkte bestellen.

■ Bisherige Bestellungen der Bundeswehr beispielsweise bei KMW und Rheinmetall über die Beschaffung von 405 Puma-Schützenpanzern im Wert von 3 Mrd. € stehen ebenso auf dem Prüfstand wie die Zusage bezüglich der 60 A 400 M im Wert von 9,25 Mrd. € gegenüber EADS. Die Deutsche Industrie befürchtet den Verlust der Bundeswehr als wichtigen Referenzkunden.

■ In den vergangenen 15 Jahren verfolgte Deutschland eine "Europa zuerst"-Strategie. Fast sämtliche signifikanten rüstungspolitischen Entwicklungs- und Beschaffungsprojekte wurden, wenn nicht national möglich, innerhalb der EU abgewickelt (A 400 M, Eurofighter, Eurocopter Tiger). Einzige Ausnahme ist das Medium Extended Air Defense System (MEADS), welches gemeinsam mit den USA und Italien getragen wird. MEADS gilt als positives Beispiel für allseitiges technology sharing.

■ Während die US-Industrie versucht, auf einem soliden Fundament neue Märkte zu erschließen bzw. auszubauen, geht es in Deutschland darum, eine Strategie zu entwickeln, die das langsame Aushungern deutscher Unternehmen verhindert. Die Branche ist von hoch spezialisierten Mittelständlern geprägt. Bis zu 30.000 Arbeitsplätze sind gefährdet. Es droht ein Verlust von technologischen Kernkompetenzen.

■ Zuwächse in den Verteidigungshaushalten werden künftig vor allem in Indien, Brasilien, in einigen Ländern Nordafrikas und in der Golfregion erwartet. Dort konkurrieren deutsche Unternehmen mit französischen, britischen, schwedischen, amerikanischen und russischen Wettbewerbern, die teils massive

politische Unterstützung durch ihre jeweiligen Regierungen erfahren. Die deutsche Industrie wünscht sich mehr Unterstützung von der Bundesregierung.

Der langfristige Erfolg der Wehrindustrie auf beiden Seiten des Atlantiks hängt im Wesentlichen von der Erforschung und Entwicklung neuer Technologien und Fähigkeiten ab. Der F&E-Anteil des deutschen Verteidigungsbudgets liegt für 2010 bei 1 Mrd. €, die USA investieren dafür 56 Mrd. US \$. MEADS ist gegenwärtig das einzige transatlantische Programm mit signifikantem F&E-Anteil. Es finden regelmäßig Rüstungsgespräche zwischen einzelnen US-Military Services und dem Bundesverteidigungsministerium statt. In nachfolgenden Bereichen gibt es kleinere Forschungsk Kooperationen bzw. Interesse an selbigen:

■ Image Processing for Weapons with HMI

■ High Power Laser Technology

■ UAS/UAV Air Traffic Management/Sense and Avoid for UAV's

■ High Speed Penetrating Casings/Hard target penetration

■ Teaming up for IED Detection

■ Alternative Energy Sources/BioEnergy/BioFuels

■ Feldlagermanagement/Ressourcenmanagement/Wastemanagement

Um die deutsche Wehrindustrie im Kernbestand erhalten zu können, muss die bisherige „Europa zuerst“-Strategie der Bundesregierung relativiert werden. Die Wiederbelebung der transatlantischen Rüstungskoope ration muss vorangetrieben werden und gleichberechtigt neben der Europa-Strategie stehen. Großbritannien zeigt erfolgreich, dass enge Kooperationen in Europa sowie mit den USA sinnvoll und machbar sind. Frankreich hat aufgrund der europäischen Rahmenbedingungen bereits erkannt, dass französisch-amerikanische Rüstungskoope rationen im nationalen Interesse sind. Teile der französischen Verteidigungsindustrie investieren

gegenwärtig massiv in transatlantische Geschäftsanbahnungen.

Von einer Revitalisierung der deutsch-amerikanischen Rüstungskooperation würden beide Partner profitieren. Konkret würde dies bedeuten:

- Die USA würden durch die verstärkte Einbeziehung deutscher Unternehmen eine weitere Belebung des Wettbewerbs mit dem Ziel der Kostensenkung erreichen. Hinzu käme der verbesserte Zugang zu deutscher Hochtechnologie und Rüstungskompetenz. Außerdem hat Bundesverteidigungsminister Guterres bereits angekündigt, zukünftig stärker auf internationale *off the shelf*-Produkte zurückgreifen zu wollen.

- Aus deutscher Sicht würde der US-Markt als notwendiges zweites Standbein zum europäischen Verteidigungsmarkt dienen. Neben der stärkeren Beteiligung an zukünftigen US-Projekten könnten deutsche Unternehmen bei Produktverkäufen in andere Märkte vom Referenzkunden USA profitieren. Eurocopters Umsatz für den von der US Army beschafften UH 72-Lakota hat sich seit Vertragsabschluss vervierfacht. Zudem würde gemeinsam mit US-amerikanischen Partnern der Zugang zu Märkten wie Indien und Brasilien direkt wie indirekt vereinfacht.

Durch die Finanzmarktkrise und die dadurch sich abzeichnenden Währungsunsicherheiten ist es für die exportstarke deutsche Rüstungsindustrie wichtig, von Währungsschwankungen unabhängiger zu werden. Hierzu scheint es betriebswirtschaftlich angebracht, langfristig einen Teil der Wertschöpfung in den Dollarraum zu verlegen, damit ein Teil der Kosten in US-Dollar und nicht in Euro denominated sind und somit die Zahlungsströme auf der Einnahmen- und der Ausgabenseite stärker in Übereinstimmung gebracht werden.

Die USA sind zu Kooperationen mit Deutschland bereit, haben jedoch eine breite Auswahl an anderen Partnern. Deutschland muss die Initiative ergreifen und deutlich machen, wo zukünftige Kooperationsfelder in den Bereichen Kauf/Verkauf, gemeinsamer Forschung, Entwicklung und

Beschaffung liegen könnten.

Die Erschließung des US-Marktes ist mit langfristigen Investitionen und Verpflichtungen verbunden. Die vom Mittelstand geprägte deutsche Wehrindustrie benötigt deshalb auch mehr politische Unterstützung. Trotzdem darf *political engineering* (Kooperation um der Kooperation willen) keine Rolle spielen. Grundlage der Zusammenarbeit müssen gemeinsame militärische Anforderungen und Bedarfslagen sowie technische Fähigkeiten der einzelnen beteiligten Projektpartner sein.

## Handlungsempfehlungen

### AN DIE BUNDESREGIERUNG:

1. Die Bundesregierung sollte zeitnah jene Teilbereiche der deutschen Industrie benennen, die für die strategischen militärischen Fähigkeiten der Bundeswehr unabdingbar sind. Die Liste dieser strategischen wichtigen Teilindustrien sollte kurz und realistisch sein und die prioritären Industriepartner der Bundeswehr definieren. Die verbleibenden Bereiche sollten dabei unterstützt werden, international wettbewerbsfähiger zu werden.
2. Bundesregierung und Vertreter der deutschen Rüstungsindustrie sollten eine hochrangige, auf sechs Monate begrenzte Arbeitsgruppe einsetzen, die konkrete Kooperationsfelder identifiziert und Empfehlungen für eine strategische Herangehensweise entwickelt.
3. Die Unterstützung der deutschen Industrie durch die Botschaft in Washington sollte merklich ausgebaut werden. Neben der Navigationshilfe durch die politische und industrielle Landschaft in den USA sollte konkrete Unterstützung beim Lobbying angeboten werden. Dabei ist besonders auf die beschränkten Ressourcen mittelständischer Unternehmen Rücksicht zu nehmen.

### AN DIE U.S. REGIERUNG:

1. Im Pentagon sollte ein hochrangiger politischer Beamter als Koordinator und Ansprechpartner für internationale Rüstungskoperationen eingesetzt werden. Gegenwärtig agieren und verhandeln die vier US-Armed Services in Entwicklungs- und Beschaffungsfragen weitgehend autonom, im Pentagon ist die Zuständigkeit der Koordination zwischen den Bereichen *Acquisition* und *Policy* aufgeteilt.
2. Die USA sollten die Aktivitäten des Office of Defense Cooperation<sup>7</sup> dahingehend verstärken, dass das Deutsche Verteidigungsministerium detailliert über US-Produkte informiert wird, mögliche Rüstungskoperationen aktiver unterstützt und US-Unternehmen bezüglich der Besonderheiten und Möglichkeiten des deutschen Marktes beraten werden.

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THE BENEFITS OF REVIVING  
TRANSATLANTIC ARMAMENTS  
COOPERATION: GERMAN AND  
AMERICAN PERSPECTIVES

## AN OVERVIEW OF GERMAN-AMERICAN DEFENSE RELATIONS

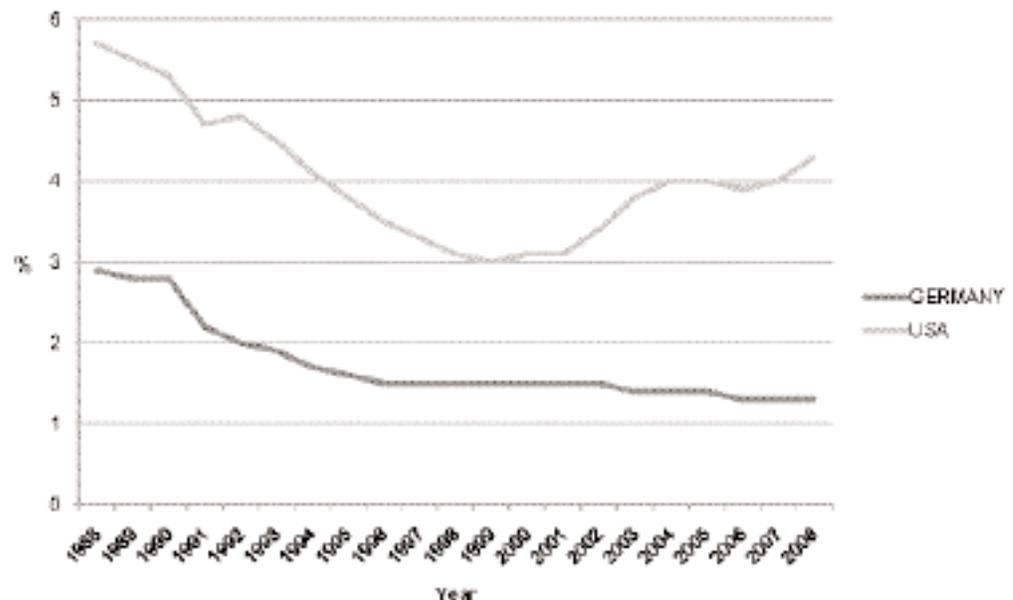
### Historical Context

The Cold War era produced close relations between the United States and the Federal Republic of Germany. The threat posed by the Soviet Union forged a strategic consensus between the two countries that managed to survive a series of sporadic crises, including German opposition to the Vietnam War, the nuclear disarmament movement in the 1980s, and opposition to sanctions against Iraq in the 1990s. After German unification the German-American relationship gradually started to cool down until reaching an all-time low as a result of the 2003 invasion of Iraq and then-Chancellor Gerhard Schröder's opposition to it. It should be noted,

however, that even during the lowest point of U.S.-German political relations in 2003-2005, the working relationship between the German and American military forces remained close.

In the wake of the terrorist attacks on September 11, 2001, the U.S. emerged as the dominant global power in projecting its force worldwide, fighting wars in Iraq and Afghanistan, conducting small scale military operations, such as in the Philippines, and providing military assistance in a dozen other places ranging from Yemen to Indonesia.

Figure 1: Military Expenditure as Percentage of GDP



In the meantime, Germany continued to focus on Europe and tried to benefit from a peace dividend after the end of the Cold War. Without a common threat perception or agreement about strategies, tactics, or defense spending, the transatlantic relationship seems to have developed from a long-lasting successful strategic partnership to a troubled, regionally-focused dialogue. The elections of Angela Merkel as German Chancellor in 2005 and of Barack Obama as President of the United States in 2008 were seen by many policymakers on both sides of the Atlantic as opportunities for a new start. It seems, however, that the wars in Iraq and Afghanistan, relations with Russia, and concerns about a rising China—not to mention domestic policy initiatives—have usurped Europe and Germany on Obama’s list of priorities.

Strategic visions between the European Union and the United States diverge sharply, while Europe itself is divided by national interests. It is safe to say that the German-U.S. relationship has transformed from a partnership in the Cold War to a friendship that is looking for a common cause. This of course has implications for foreign and defense policy in Germany and the U.S. As the transatlantic relationship continues to evolve, the goal of such a partnership influences the capabilities needed by both sides of the Atlantic. The roles in this burden-sharing partnership have not yet been determined. Since Germany currently lacks the ability and the political will to enhance its expeditionary warfare capabilities, the question of what Germany brings to the table in terms of this “burden-sharing” remains an unanswered, frequently asked, question in Washington, DC.

### German-American Armaments Cooperation

The Bundeswehr was rapidly reconstituted in the 1950s using U.S. equipment ranging from battle tanks to destroyers to combat aircraft, leading to a strong preference for U.S. technology. This preference allowed Germany’s defense industry to slowly move from being a supplier of components for U.S. systems to a co-producer of major systems. For example, Germany participated in the Starfighter consortium and cooperated on a joint development program for a futuristic main battle tank, the MBT-70, in the 1960s. The MBT-70 program failed mainly due

to the partners’ inability to harmonize their requirements. As a result Germany and the U.S. started independent national tank programs, leading to the German Leopard I tank and the U.S. M1 Abrams tank. Both tanks incorporated much of the technology developed through MBT-70. Germany then decided to not participate in the F-16 Falcon Consortium in favor of developing the Panavia Tornado with other European states. The F-16 Falcon was built by a consortium between the United States and Belgium, Denmark, the Netherlands, and Norway. All five NATO countries were involved in building F-16s for their air forces, with components manufactured in all countries and assembly lines located in Belgium and the Netherlands.<sup>8</sup> When development of the Tornado took longer than expected, Germany bought several hundred F-4F Phantoms in 1973 as gap-fillers. With the exception of four battalions of Patriot air defense missiles, the purchase of the Phantoms marked the last major weapon system procured from the United States.<sup>9</sup>

Since the late 1970s, the primary bilateral defense cooperative programs involving joint ventures between U.S. and German firms have been more modest—mainly focused on the development of new guided missiles. These include:

- NATO Evolved Sea Sparrow Missile (ESSM)
- Rolling Airframe Missile (RAM)
- Guided MLRS (G-MLRS)
- AGM-88 Block-6 High Speed Anti-Radiation Missile (HARM) Precision Navigation Unit (PNU)

There are two newer ventures. First the EuroHawk, a “Europeanized” version of the Global Hawk high-altitude long endurance unmanned air vehicle (UAV) for intelligence, surveillance, and reconnaissance, and second, a joint venture between Diehl Defense BGT and Raytheon Missile Systems GmbH, formed in 2004 to overhaul and upgrade older versions of the AIM-9 Sidewinder for export customers.<sup>10</sup>

The only ongoing major transatlantic defense project that includes a significant research and development portion is the Medium Extended Air Defense System

(MEADS). MEADS is a cooperation between Germany, Italy, and the United States, with participating companies, Lenkflugkörpersysteme (LFK), MBDA Italia, and Lockheed Martin, respectively. It is expected that the first test flights of this mobile air defense system will take place in 2012.

### German-American Defense Trade and Industrial Cooperation

Germany is a major U.S. trading partner in the broader economy, with exports from the U.S. to Germany worth €40 billion and imports from Germany of €54 billion.<sup>11</sup> The balance of trade is generally in Germany's favor, which only mirrors the current debate about global macroeconomic imbalances.

German-U.S. armaments cooperation has long-standing legal underpinnings. Germany has the special benefit of several bilateral agreements with the United States to ease the flow and speed of defense trade and cooperation between the nations. Of particular note, the two nations are parties to a reciprocal "Memorandum of Understanding" regarding defense procurement, which provides, among other things, that German and American defense suppliers are treated in principle no less favorably with regard to procurement than domestic companies.<sup>12</sup>

German-U.S. defense industrial cooperation today is mostly industry-driven, lacking any significant government strategy or initiative. Although Germany has long been a major customer for U.S. defense products, as well as a partner in a few major cooperative development programs, defense trade with Germany is only a small fraction of overall U.S.-German trade. While the United States exports a wide range of systems and subsystems to Germany, including radar, missiles, avionics, and electronics, German exports to the United States tend to occupy distinct niches in which German companies have unique products (e.g., lightweight tank tracks, high-frequency signals intelligence) or a technological advantage (e.g., tank guns and transmission, precision optics, detonators, coastal radars, ammunition).

# THE NEED FOR A EUROPEAN UNION DEFENSE POLICY AND THE ROLE OF NATO

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Germany's strong entanglement in the European Union's defense and security structure and policies necessitates a brief look at the EU framework and context. For more than twenty years Germany had committed itself to an "EU first" policy. Every defense research, development, or procurement program that could not be done nationally was done with EU partners. This led to the fact that all major defense acquisition programs, such as air transport, fighter jets, helicopters, and ships, have been done within the EU. Many other European governments, including France, Spain, and Italy, have promoted, established, and tried to foster a strong European defense industrial base driven by a desire for "independence" or "autonomy" from the United States. The goal was a European defense industry with capabilities in key areas and a military able to operate autonomously, with Great Britain being the exception to the rule.

## Development of an EU Defense Policy

Significant progress has been made in the European Union toward a common European security policy. In 1996 Germany, France, Great Britain, and Italy created the "Organisation Conjointe de Coopération en matière d'Armement" (Organization for Joint Armament Cooperation or OCCAR) with the goal of providing "effective and efficient arrangements for the management of certain existing and future collaborative armament programmes."<sup>13</sup> Today OCCAR manages six major cooperative programs, each involving somewhat different combinations of national partners:

- A400M — A Tactical and Strategic Airlifter (France, Germany, Italy, Spain, Great Britain, Turkey, Belgium, and Luxembourg)

- Boxer — A Multirole Armored Vehicle (Germany and Netherlands)

- COBRA — Weapon Locating System (France, Great Britain, Germany, and Turkey)

- FREMM — Frégates Europeennes Multi-Missions (France and Italy)

- FSAF — Surface-to-Air Anti-Missile System (France and Italy) and PAAMS — Munitions for the Principal Anti-Air Missile System (France, Italy, and Great Britain)

- Tiger — A New Generation of Helicopters (France, Spain, and Germany)

In addition Germany, Spain, Italy, and Great Britain created the Eurofighter Typhoon consortium.

The European Defense Agency (EDA) was established in 2004 as an agency pursuing four goals: develop European capabilities, promote armaments cooperation between member states, promote defense research and technology, and develop the necessary tools for a competitive defense industrial base and market in the EU. Under the last objective, the EDA produced legally non-binding codes of conduct. The two new EU Directives<sup>14</sup> that concern the European defense market, the EC Defense Procurement Directive and the Intra-EU Transfers Directive, are currently being transposed into national legislation.

The EC Defense Procurement Directive applies the basic market principles of the EU's existing Public Procurement Directive, including transparency and competitive bidding requirements, to defense

markets. But the Directive recognizes the unique and sensitive nature of defense markets and, hence, affords more flexibility to contracting authorities and also provides safeguards designed to ensure the security of information and supply.

The EU Transfers Directive is expressly designed to create an improved and simplified regulatory environment for intra-European defense transfers that both strengthens the European defense industry's competitiveness and improves security of supply of European defense products. The Directive seeks to accomplish these goals by creating broader and less burdensome internal export license mechanisms while maintaining clear, strong controls at EU external frontiers.

The European Security and Defense Policy (ESDP) aims to allow the Union to develop its civilian and military capacities for crisis management and conflict prevention at the international level, thus helping to maintain peace and international security, in accordance with the United Nations Charter. ESDP, which does not involve the creation of a European army, is developing in a manner that is compatible and coordinated with NATO. The Political and Security Committee (PSC), the EU Military Committee (EUMC), and EU Military Staff (EUMS) are the permanent political and military structures responsible for an autonomous, operational EU defense policy.<sup>15</sup>

The Treaty of Lisbon renamed ESDP to Common Security and Defense Policy (CSDP) and created the post of High Representative of the Union for Foreign Affairs and Security Policy:

*"The common security and defence policy shall include the progressive framing of a common Union defence policy. This will lead to a common defence, when the European Council, acting unanimously, so decides. It shall in that case recommend to the member States the adoption of such a decision in accordance with their respective constitutional requirements.*

*The policy of the Union in accordance with this article shall not prejudice the specific character of the security and defence policy of certain member states, which see their common defence realised in the North Atlantic Treaty Organisation, under the North*

*Atlantic Treaty, and be compatible with the common security and defence policy established within that framework."*<sup>16</sup>

Constantly shrinking European defense budgets, however, seem to contradict the objectives of many of these activities and policies. In addition, European governments have clear preferences for their national defense industries and therefore spend almost 85 percent of their equipment budget domestically.<sup>17</sup> Member states are reluctant to accept mutual interdependence. Bigger states in particular see international cooperation as an extension of their own industry and enact procurement policies that protect their national defense industries.

On the other hand, French President Nicolas Sarkozy stated in 2007 that:

*"...Europe can no longer afford the luxury, with its combined defence budgets still well below that of the U.S., of having five ground-to-air missile programmes, three combat aircraft programmes, six attack submarine programmes and around twenty tank programmes."*<sup>18</sup>

Europe also has twenty naval shipbuilders and twenty-three shipyards, while the U.S. has only two companies making warships. In total, Europe has eighty-nine major weapons programs compared to only twenty-seven in the United States.<sup>19</sup> The high number of programs and companies combined with shrinking budgets makes it increasingly difficult for the European industry to sustain itself on European acquisition spending alone. Given such limits, the incentive for European defense industries to gain access to the U.S. market is growing. While Great Britain has had strong ties and intensive cooperation with the U.S. for decades, France just recently started to engage with the U.S. by focusing on common mission scenarios and interoperability with the goal of fostering defense industry cooperation.

Industrial consolidation in Europe has been avoided so far due to fear of significant job losses and increased interdependence. Little cooperation can be observed in the R&D sector, leading to redundancies, a massive waste of resources, and inflated prices. EU member states are also confronted with a

lack of scale in order to carry out large R&D armament projects economically.<sup>20</sup> R&D costs of major projects mount up to one third of the total, amplifying the difference in scale between the EU and the U.S. While industrial consolidation, closer cooperation, and less national agendas have been called for and promised by many EU member states for ten years, it remains questionable whether Europe will be able to become more effective and to agree on workable defense budgets.

### NATO's Role in Transatlantic Defense Cooperation

Cooperation between NATO countries in the armaments field is the responsibility of the Conference of National Armaments Directors (CNAD),<sup>21</sup> which meets on a regular basis to consider political, economic, and technical aspects of the development and procurement of equipment for NATO forces. The Research and Technology Board, which is an integrated NATO body responsible for defense research and technological development, provides advice and assistance to CNAD and to the Military Committee. It conducts a program of collaborative activities across a broad range of defense research and technology issues. Assistance on industrial matters is provided by NATO's Industrial Advisory Group (NIAG), which enables CNAD to benefit from industry's advice on how to foster government-to-industry and industry-to-industry cooperation and assists CNAD in exploring opportunities for international collaboration.

Despite all of these institutionalized efforts, NATO's position is ambiguous. The Alliance plays a relatively minor role in shaping the transatlantic defense industrial base. NATO is occasionally responsible for awarding contracts, as it did in April 2004 when it awarded its largest defense contract in decades to create a fleet of surveillance aircraft called Alliance Ground Surveillance (AGS). The NATO AGS system was "intended to provide a transformational capability that delivers an integrated ground picture and situational awareness to every level of command from Special Forces to Brigade Commander so as to provide actionable information which can serve multiple purposes: protect troops in the field; protect national borders; support humanitarian missions;

support peace-keeping missions; and defend against terrorism."<sup>22</sup>

The AGS project, however, is largely considered to be a failure in terms of transatlantic cooperation.<sup>23</sup> It started with a budget of €4.6 billion and a "mixed fleet" concept, uniting European and American systems and technologies and ended as a U.S. "off the shelf" product based on the "Global Hawk" UAV and U.S. radar technology. European technology will only be included in the ground stations. The program was comprised of twenty-three nations, with strong leadership from the U.S., but after both France and Germany withdrew financial commitments, others followed suit, leaving a total budget of €1 billion.

For the most part, NATO can do little at the moment to shape corporate restructuring or foster cooperation, except indirectly by, for example, setting weapons performance goals and interoperability standards.

## THE UNITED STATES: A STRONG INDUSTRY LOOKING FOR NEW OPPORTUNITIES

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From World War II to the end of the Cold War, the prevailing paradigm in U.S. defense policy was that the United States must be prepared to fight by itself and supply itself during any conflict from within the domestic industrial base. This paradigm was based on a largely independent U.S. defense industrial capability, buying primarily from U.S. sources, and a strong aversion to technology sharing with its allies to protect its technological-military lead.<sup>24</sup>

The significant post-Cold War decline of defense budgets changed the environment and showed the need for the consolidation of the defense industry. While in 1988 the U.S. defense budget was projected to be well above \$600 billion by the early 1990s, it did the opposite, dropping below \$300 billion in 1992 and continued to head steeply downward, creating the so-called peace dividend.

It turned out that 1993 was the year that changed the character of the U.S. defense industrial base. Then-Secretary of Defense Leslie Aspin invited fifteen defense industry chief executives to drop by the Pentagon for dinner, a dinner that has since been known as the “last supper.”<sup>25</sup> It was, so the story goes, an invitation one simply could not refuse. At the time the Defense Department (DoD) was provided with surface combatants by five contractors, rocket motors by five contractors, bombers by three contractors, submarines by two contractors, and so forth. The Secretary made it abundantly clear that the DoD was not going to solve the industry’s overcapacity problem. He assured the CEOs, however, that the DoD would strongly support industry consolidation and approve financial arrangements that benefited companies as long as they also significantly benefited the government.

The rest is history. General Electric Aerospace merged with Martin Marietta, which combined with Lockheed. McDonnell Douglas joined Boeing. Grumman joined Northrop. At the end of the process the fifty largest defense suppliers of the early 1980s had been transformed into the top five contractors: Lockheed Martin, Boeing, Northrop Grumman, General Dynamics, and Raytheon.

However, despite consolidation the altered economic and security environment drove defense industries in the United States and other countries to export and “globalize” in order to survive. Further wars in the Balkans in the 1990s highlighted real capability and interoperability gaps between the United States and its coalition partners. Simply put, the ability to fight wars together was—and continues to be—limited. A sizable “investment” gap between the United States and its allies, together with a concerted failure to address longstanding interoperability problems, created a real and growing problem.

Finally, there was the recognition that the globalization of the broader economy made greater defense industrial collaboration and cooperation with the allies necessary in order to use economies of scale and to get access to leading technologies from allied nations. The U.S. was thereby able to maintain its technological edge in a world where technology may be a decisive advantage on the battlefield in future wars and at the same time make use of economies of scale in the development and production of new armaments. This led to a number of armaments cooperation projects, most prominently the F-35 Joint Strike Fighter.

After the attacks of September 11, 2001 and the beginning of the “Global War on Terror,” the defense

budgets again rose drastically. This created, in combination with an aggressive and protective industrial policy, a financially healthy and powerful U.S. arms industry.

However, the general overconsumption by the U.S. in the 1990s and early 2000s and the huge amounts of public funds that were invested into saving the economy during the recent financial crisis and the recession took their toll. For the next five years, savings of a total of \$100 billion<sup>26</sup> (from the 2009 U.S. defense budget of \$637 billion) is supposed to be achieved through cost reductions, renegotiation of existing contracts, and in-sourcing. This includes the closure of the U.S. Joint Forces Command in Norfolk, a reduction of 10 percent in funding for support contractors in each of the next three years, and a slimming of the number of generals, admirals, and senior Defense Department civilians. The savings, however, will mostly be reinvested, which seems to motivate those involved in the process.

### U.S. Export Regulation: Loosened Restrictions?

As a part of reducing the United States' massive trade deficit, and under pressure from the U.S. defense industry, which wants to be freed from its export restrictions, the Obama administration has increased its efforts aimed at reforming the weapons export control system. For more than a decade, one study after another has highlighted the problems inherent in U.S. export controls—notably the International Traffic in Arms Regulations (ITAR). Arms and related technologies subject to U.S. export control cannot be exported from the U.S. without an export license issued by the Department of State's Directorate of Defense Trade Controls. A slow bureaucracy and several layers of export control across more than three different agencies create significant friction for important international deals and partnerships with friends and allies. That is why the U.S. export system was and still is an administrative burden that ties up huge amounts of resources every time an application is made.

The U.S.' use of export controls for, as some argue, protectionist and political purposes has even had the effect of making American defense components toxic

to several potential international customers. The latest example is Canada's \$3 billion frigate modernization program, which is specifically aimed at excluding American technologies from key areas despite the fact that they have privileged status and agreements regarding export control. ITAR policies and practices thus limit opportunities for U.S. firms in Europe, especially at the subsystem level. Most European governments, including Germany, are concerned about relying on ITAR systems and subsystems because they potentially limit their operational autonomy over major systems (especially in real-time crises), introduce program delays and risks, and curtail their export flexibility for systems with U.S. components.

In April 2010, U.S. Secretary of Defense Robert Gates, backed by several other departments, implemented a reform push that has been underway for years. The proposed "4 singles" approach would make significant changes to American technology export controls, creating a single export control list, a single newly-created export licensing agency, a single unified IT system, and a single agency to coordinate enforcement. Because of the complexity of the export control system, however, no significant short-term changes are to be expected.

In September 2010, the United States Senate approved the U.S.-United Kingdom and the U.S.-Australia Defense Trade Cooperation Treaties.<sup>27</sup> These treaties allow for the export or transfer of certain defense articles and defense services controlled pursuant to ITAR between certain persons from the respective countries, without the need for export licenses or other ITAR approvals. It is open to debate whether these special export control agreements actually reduce bureaucracy and costs that come with international cooperation. The Canadian government, as mentioned above, seems not to think so.

Some European defense companies—including BAE, EADS, and Rolls-Royce—have managed to gain limited access to the American market. The predominant view of the U.S. government, however, remains skeptical regarding increased transatlantic defense industrial relations. The U.S. wants to protect its technology from falling into the "wrong" hands. Sometimes different approaches to foreign policy have also made

closer cooperation harder to achieve. Crucially, different European states have varying perspectives on which countries should be traded with and which should be classified as “rogue” nations. European initiatives to resume defense exports to China harden this view. On the other hand, dozens of German companies such as LFK-Lenkflugkörper, Diehl BGT Defense, MTU Aero Engines, and Renk are working successfully as subcontractors with U.S. companies providing components to subsystems.

## GERMANY: CAUGHT BETWEEN POLICY GOALS AND BUDGET CUTS

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The Bundeswehr and the German defense industrial base are currently in turmoil. As part of the current Bundeswehr reform, general conscription has been suspended and planning by the “structure commission” on further transformation of the armed forces is ongoing.

It is widely expected that the framework conditions for the German armaments industry will worsen in the coming years. In May 2010 the German defense minister zu Guttenberg stated:

*“If one looks at the current numbers by the Finance Ministry there is a need for a paradigm shift when it comes to defense spending. A symbolic cutting of a few individual projects or orders will not be enough, not by a long shot.”*<sup>28</sup>

In October 2010 the plan for the “paradigm shift” included budget cuts for the next five years leading to a total of €8.3 billion in savings based on the 2009 defense budget of €31.1 billion. Current planning also includes the further shrinking of the research and development (R&D) budget down to approximately €1 billion, which is almost completely budgeted for institutional funding and current R&D programs.

Defense Minister zu Guttenberg also complained about “grotesque” defense contracts and announced a “tougher pace” toward the industry.<sup>29</sup> The German acquisition system is largely wedded to national suppliers for its national acquisitions of systems, especially for ground armored vehicles and command and control systems. As a result the EU and EDA have been increasingly pressuring national procurement authorities to rely less on Article 296 of the EC Treaty,<sup>30</sup> which allows member states to derogate

from community rules if this is necessary for the protection of their essential security interests. The European Court of Justice also has made a series of rulings related to defense markets that effectively restrict the ability of national governments to invoke Article 296.<sup>31</sup>

Defense Minister zu Guttenberg broke this “buy German” pattern when he ordered an additional sixty EAGLE IV armored vehicles from MOWAG (General Dynamics, U.S.) in addition to an existing order on a “mission based immediate need.” He justified preferring international products to German ones by saying that he puts the safety of his soldiers over the interests of the German defense industry.<sup>32</sup>

While this could be seen as a one-sided move toward a more open and competitive international defense market—or at least a market within the borders of NATO—the perception of many in the U.S. is, however, that this is a rare exception and that the German defense market, while legally open to U.S. firms, in practical terms is effectively almost closed since Germany spends almost all of its procurement and R&D budget domestically and with EU partners.<sup>33</sup>

One of the key challenges Germany faces right now is aligning recent defense policy papers by the German Ministry of Defense promoting specific goals with the necessary (and in reality, lacking) budget. This process creates much tension since the last two defense documents directly addressing procurement are just a few years old. The 2006 White Paper on German Security Policy and the Future of the Bundeswehr highlights the following:

Germany needs to maintain “*indigenous defence*

*technology capabilities in order to co-shape the European integration process in the armaments sector. These will guarantee cooperability and assure an influence in the development, procurement and operation of critical military systems. Only nations with a strong defence industry have the appropriate clout in Alliance decisions. The political leadership and industry must jointly define the strategic positioning of German defence technology in Europe. The federal government will do its utmost in this regard to preserve a balanced mix of defence technology, including its high-technology areas, in Germany. National consolidation, such as is taking place in the shipbuilding industry, is preparing Germany's defence technology enterprises to suitably position themselves for the restructuring process in Europe."*<sup>34</sup>

The White Paper also articulates a European preference:

*"A modern Bundeswehr requires an efficient and sustainable defence industry base. This will need to be defined increasingly in a European context, given the limited national resources and restrained national demand. Political, military and economic aspects make in-depth cooperation highly important for the EU Member States to meet the materiel requirements of their armed forces. For this reason, the development of a European armaments policy is a central goal in establishing and expanding the European Security and Defence Policy."*<sup>35</sup>

One year later the German Ministry of Defense signed a "Joint Declaration on National Key Defense Technology Capabilities" with the Defense Industry Committee of the Federation of German Industries (BDI).<sup>36</sup> The Declaration is the result of intensive consultation between the Ministry and the German defense industry and is designed to implement the 2006 White Paper's transformational strategy. The Declaration, like the White Paper, also clearly reflects the tension between the Europeanization of the defense industry and the desire to maintain autonomous national players. In a remarkably candid statement focused on the preservation of German defense industrial capabilities, the Declaration states:

*"[...] a strong and reliable national defense industry*

*offering a great deal of technological expertise and adequate capacities is therefore a vital partner in security[...]the ongoing consolidation process within the European and transatlantic defense industries must be viewed from a particular, quite national angle."*

And:

*"The Ministry of Defense will include the criteria of the defense core-capabilities in its procurement activities as far as appropriate and possible. This will give the German defense industry orientation for their planning."*

These "National Key Defense Technology Capabilities"<sup>37</sup> from 2007 include:

Systems:

- Space-Based Reconnaissance
- Combat Aircraft
- Transport Aircraft
- Helicopters
- Unmanned Air Vehicles
- Air Defense Systems
- Protected Wheeled Vehicles
- Tracked Vehicles
- Infantrymen of the Future
- Submarines
- Autonomous Underwater Vehicles
- Surface Combatants
- Sea Mine Countermeasures
- Modeling and Simulation
- Bundeswehr IT Systems

Subsystems:

- Electronic Reconnaissance Electronic Warfare
- NBC Defense Components Munitions Defense Components

Given the nature of this comprehensive list the question remains of what kind of major defense technology or capability the German government and the defense industry does not consider crucial and therefore a matter of national security. Such an outlook impedes the Europeanization of defense policy.

One might wonder how the White Paper and the Declaration can exist in the same time and space as the ongoing German defense budget reductions since 2004. Orders already signed by the Bundeswehr—for example with KMW and Rheinmetall for the procurement of 405 Puma infantry fighting vehicles, worth €3 billion—are also under revision as is the commitment regarding the sixty A400M transport airplanes for €9.25 billion to EADS.<sup>38</sup> The loss of the Bundeswehr as an important reference customer would be a hard hit for the defense industry. The articulated “Plan B,” meaning that if Germany cannot provide for its industry then Europe should, is also hardly compatible with financial realities of European partner nations.

Internationally, the German defense industry is quite competitive in some areas (e.g., submarines, armored vehicles, missiles, small arms, ammunition) and has doubled its share of global arms exports in the past decade, making it the third largest arms exporter (11 percent of world market share in 2005-2009).<sup>39</sup>

However, the main customers are EU member states; the largest single customers are Turkey, Greece, and South Africa. Turkey, previously a major customer through the purchase of the battle tank Leopard 1 and 2, is currently developing its own main battle tanks with the support of South Korea. Greece, as a major customer of submarines, has severe fiscal problems that will sideline defense spending for the years to come. France will cut its defense budget by up to €5 billion by 2014. The British will reduce their defense budget by 8 percent. Spain, also for fiscal reasons, will most likely not be able to buy more German products.

The last option mentioned in the Declaration, the political support for increased export, also seems very difficult to deliver. The most active, and thus most attractive, markets for the German defense industry are India, Brazil, the Gulf States, and some countries in North Africa. German companies, however, compete there with French, British, Swedish, American, and Russian firms who receive more lobbying support from their governments. For example, Germany sent its Minister of Economics and Minister of Foreign Affairs to India, which is expected to spend \$80 billion between 2012 and 2022 to upgrade its military.<sup>40</sup> Meanwhile France was represented by President Sarkozy, the U.S. by President Obama, and Russia by President Dmitry Medvedev, making those governments that much more successful in procuring defense contracts for their industries. German industry therefore also wants more “heavy weight” support from the federal government.

This means that not only the Bundeswehr, German industry’s favorite and reference customer, will further cut back funds for research, development, and procurement budgets, but also that “Plan B”—survival by focusing on sales and cooperation within Europe—is not a realistic option. The third strategy, increased exports to growing defense markets, lacks a comprehensive strategy as well as the necessary political support to succeed. This leads to the conclusion that without a new strategic approach, the German defense industry will slowly slip into a process of starvation.

The recent report of the “Structure Commission of the Bundeswehr”<sup>41</sup> calls for a fundamental reform of procurement policies, methods, and institutions. One of the goals is to no longer go for “gold edge” solutions, meaning that the Bundeswehr has to stop ordering systems with too many specifications and extras that make them too expensive and take too long to build. “Off the shelf” products and technologies should also be chosen over new developments and meeting NATO standards should enhance international sales.

## Germany's Export Regime in EU Context

Like other EU member states, Germany signed the 1998 EU Code of Conduct on Arms Exports, an agreement that harmonized regulations across all EU member states and established general principles for the transfer of armaments and military technology.<sup>42</sup> The EU Intra-EU Transfers Directive, which simplified terms and conditions of transfers of defense-related products within the EU, entered into force in June 2009 with the necessary national legal and administrative provisions applying from 30 June 2012 onward. The national governments can decide if U.S. firms are eligible for similar treatment.

German export control policy is administered by the Ministry of Foreign Affairs, which issues export licenses for all military and dual-use items. Licenses include stringent end-user certification in conformance with the EU Code of Conduct on Arms Exports. Under the War Weapons Control Act (KWKG), exports to “third party” countries outside of the EU, NATO, and “NATO-equivalent” countries (Australia, New Zealand, Switzerland, and Japan) are severely restricted:

*“The Federal Government maintains strict control on the export of arms. In contrast to the practice in a number of other countries, Germany does not treat arms exports as an instrument of foreign policy. Decisions on arms exports are taken after careful consideration of external, security and human rights aspects. If the departments involved in the decision-making process cannot agree as to whether a license can be issued, the Federal Security Council usually has the last word.”<sup>43</sup>*

These regulations are seen by some as a severe hurdle for the German defense industry to capitalize on its ability to access other markets. In international development consortia it also leads to adjustments where the marketing of the final product will be done by the international partner, who in return expects a bigger share of the value chain.

Each year the German federal government issues a Report on Military Equipment Exports,<sup>44</sup> detailing how many export licenses were granted, to whom, and for what particular items. The Report does not

cover actual deliveries, except for two particular categories of defense products—*Kriegswaffen* (literally, “War Weapons” or major end items) and small arms and ammunitions delivered to third world countries.

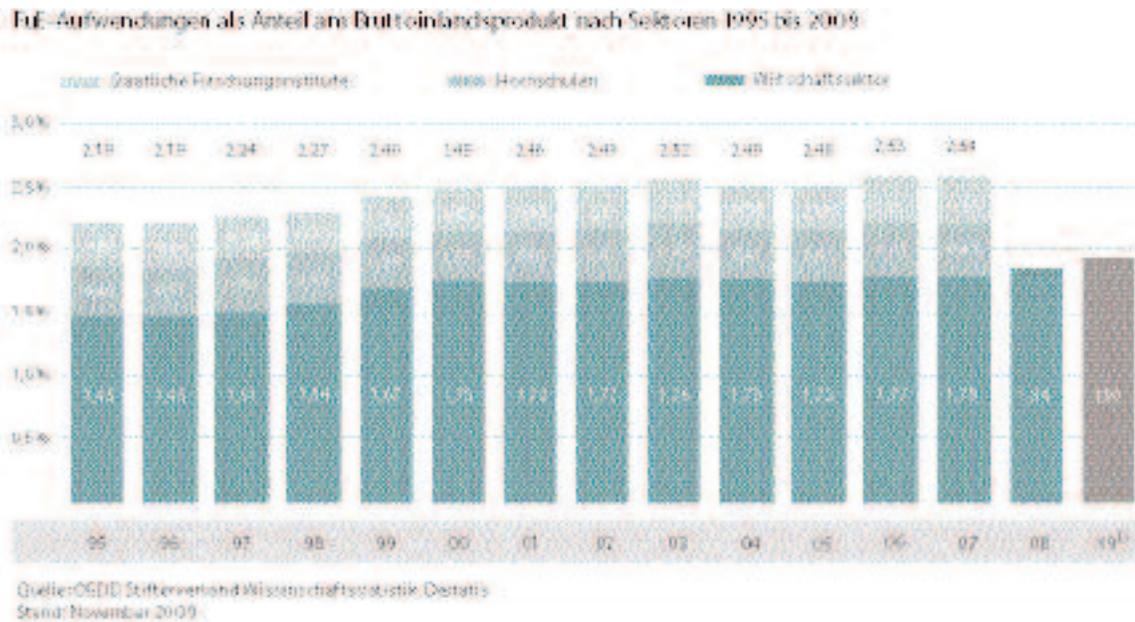
# THE STATUS QUO OF GERMAN-AMERICAN COOPERATION IN DEFENSE RESEARCH, DEVELOPMENT, AND TECHNOLOGY (RD&T)

The strength of the armed forces as well as the long-term success of the military industry on both sides of the Atlantic depends largely on the research and development of new technologies and capabilities. In 2009 the United States invested \$56 billion in this field, while the amount of the German R&D budget was roughly €1.3 billion (with €1 billion for 2010). The German R&D budget is almost completely consumed by institutional funding and current R&D programs, leaving only a tiny margin for the research of new technologies and capabilities.<sup>45</sup>

Even in the EU context, Germany is exceptional for how little of its defense budget is spent on RD&T.

Several factors account for this. First, Germany has maintained an excessively large and aging force structure that consumes an increasing share of the budget in Operations and Maintenance (O&M) costs. Second, O&M costs are being driven up by Germany's unprecedented overseas commitments, for which neither the budget nor the German military is properly structured. And last but not least, defense in general and defense RD&T are simply not a political priority to the German government. In addition to these defense-specific factors, it is worth mentioning that the RD&T share of German industry is traditionally quite large compared to public investment in RD&T.

Figure 2: R&D Expenditure as Part of GDP from 1995 to 2009, Divided by Sector



With Germany committed to a number of large, multi-national procurement programs such as A400M, Eurofighter, Eurocopter Tiger, and Multi Role Armored Vehicle (MRAV)/Boxer, as well as to a number of prominent national programs such as the U-212 class submarines, the K-124 Corvette, the F-125 Frigate, and the Puma infantry fighting vehicle, the defense budget is already under severe pressure. The loser in this equation is the RD&T budget. Germany apparently looks to the establishment of an integrated European defense RD&T program under the aegis of the EDA as a means of at least partially ameliorating the shortfall.<sup>46</sup>

The evolution of defense technology is in general encouraging greater transatlantic cooperation. Defense technologies of the future—electronics, information systems, communications—are and will be increasingly “dual use” (applicable in both commercial and defense contexts). This has encouraged the procurement of subcomponents for defense systems to become increasingly transnational. The Pentagon’s program of support for the acquisition of commercial off-the-shelf technology has encouraged this trend.

### Current German-American Research and Technology (R&T) Projects

The defense and research organizations of the four branches of the U.S. Armed Forces and the leadership of the Office of the Undersecretary for Defense, Director of Defense Research and Engineering (OUSD DDR&E)<sup>47</sup> meet biannually for a R&T seminar to exchange strategies and ongoing R&T activities as well as to identify new common research projects. General focus areas of mutual interest include infrared-sensors, technologies for laser applications, unmanned vehicles, and protective technologies, in particular:

- Image Processing for Weapons with HMI (Human Machine Interface)
- High Power Laser Technology
- UAS / UAV Air Traffic Management / Sense and Avoid for UAVs

- High Speed Penetrating Casings / Hard Target Penetration

- Teaming up for IED Detection

- Alternative Energy Sources / Bio-Energy / Bio-Fuels

- Camp Management / Resource Management / Waste Management

German-U.S. research cooperation is a bottom-up driven process with little to no strategic concept. It is simply based on shared interests on technologies and on the availability of funding.

The Medium Extended Air Defense System (MEADS) is currently the only major transatlantic program with significant R&D share. MEADS aims to replace Patriot missiles in the United States and Germany as well as Italy’s even older Nike Hercules missiles.<sup>48</sup> MEADS will be designed to kill enemy aircraft, cruise missiles, and UAVs within its reach, while providing next-generation point defense capabilities against ballistic missiles. The MEADS venture is being led by Lockheed Martin and includes MBDA Italia, French-German aerospace firm EADS, and Germany’s MBDA-LFK (LenkFlugKörpersysteme). Diehl BGT Defense will contribute the secondary missile in the German MEADS system. Development work is allocated in accordance with national funding: U.S. 58 percent, Germany 25 percent, and Italy 17 percent.

MEADS is considered an example for “technology sharing [that] was being seen at rates never seen before. Meeting ITAR requirements was labor intensive, but the transfers were happening.”<sup>49</sup>

# THE FUTURE OF GERMAN-AMERICAN ARMAMENTS COOPERATION

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Almost all Germans interviewed for this Policy Report said that they consider the transatlantic partnership very important and that they would like to cooperate more with the U.S. Very few of them, however, had a specific project, strategy, or even concrete suggestion on how to generate significantly more business with the U.S.

In October 2009, Dr. Jacques Gansler, the former U.S. Under Secretary of Defense for Acquisition, Technology, and Logistics pointed out the following:

*"Today there is not a single U.S. weapons system that doesn't have foreign parts in it—and they are selected because they are better, not because they are cheaper."<sup>50</sup>*

German companies already provide the U.S. with lightweight tank tracks, tank canons and tank gear, precision optics, detonators, radars, ammunition, and many other parts and components. This small but working armaments cooperation could be the foundation of increased partnership and projects.

As such, the U.S. has five general core objectives<sup>51</sup> of armaments cooperation:

1. operational — increase military effectiveness through interoperability and partnership;
2. economic — reduce weapons acquisition cost by sharing costs and economies of scale, or avoiding duplication of development efforts;
3. technical — access the best defense technology worldwide, and help minimize the capabilities gap between partners;

4. political — strengthen alliances and relationships with other friendly countries; and

5. industrial — bolster domestic and allied defense industrial bases.

These objectives are similar to Germany's, with the exception of the "EU First" preference as shown above. While ITAR reform is on the way, the U.S. export control regime continues to result in additional costs, schedule delays, and risks to third-country exports. This has significant implications for any discussion of armaments cooperation, defense trade flow, and balance of trade.

It appears, however, that that U.S.-German joint ventures fare better than German firms seeking ITAR authorizations to compete against U.S. firms. In general, programs with U.S. government support seem to have much less trouble with ITAR than others.

On the U.S. side, there is a general openness toward Germany and a positive perception of the capabilities of the German defense industry. However, since there is no strategy on how to foster more German-U.S. armaments cooperation on either side, a lot of potential business is missed.

The shrinking European defense budgets provide a particularly compelling rationale for Germany to access the U.S. defense market through transatlantic cooperation, be it in a bilateral or a multilateral setup. Increased industry collaboration could provide defense policymakers with enhanced choices, competition, and flexibility in defense acquisition. This could provide substantial cost savings to all involved. As the U.S. industry has consolidated, the advan-

tages of competition—in pricing, technical innovation, and timing—are slowly decreasing. Also, as the U.S. budget deficit grows, future defense budgets will come under further pressure. Stronger competitive transatlantic options for defense equipment could be part of the answer to budget challenges.

Due to the dramatic changes in Germany and Europe, Germany will have to put its “EU First” strategy into perspective. By strategically reviving German-American armaments cooperation, Germany and its defense industry could stabilize and rely on a second pillar, in addition to the strong commitment to Europe. Not only would an increased participation in future U.S. projects benefit German companies, but they could also benefit indirectly from sales to the U.S. by having the U.S. as a reference customer. For example, Eurocopter’s sales of the UH-72 Lakota to the U.S. Army significantly increased the demand for the civil version of the aircraft in other markets. Having a closer cooperation with the U.S. and between U.S. and German companies could also ease access to emerging markets such as India and Brazil.

Because of the financial market crisis and the resulting currency uncertainties, it is also important for the export-driven German armament industry to be less dependent on currency fluctuations. For this purpose, it seems economically appropriate to transfer a larger part of the net product into dollars.

Great Britain has successfully demonstrated for decades that a close cooperation with(in) Europe and the U.S. is reasonable and feasible. France has also recently recognized that a much stronger Franco-American military cooperation is in its national interest. Parts of the French defense industry are currently investing heavily in transatlantic business opportunities.

A revitalization of German-American defense cooperation would benefit both partners. Currently there are two potential transatlantic armaments cooperation projects on the horizon. The first one, the Future (Heavy) Transport Helicopter (FTH) Program, is government driven and based on the need for a replacement of the CH 53G in Germany after 2020. It also aims to offer France a heavy-lift helicopter option. Eurocopter and Boeing are currently working

together as potential partners. The U.S. is evaluating the need for such an aircraft and might participate. Second, the German firms Rheinmetall and KMW, in cooperation with Boeing and SAIC, are currently competing for the U.S. Army’s Ground Combat Vehicle (GCV). At the moment it is unclear whether any of the programs will become reality. Both would, however, not carry significant R&D budgets but, rather, would work on existing technologies.

As pointed out earlier, Germany and the U.S. approach this topic from different perspectives. The U.S., be it government or industry, is in general interested in working more with Germany but has many other capable partners.<sup>52</sup> Germany, on the other hand, in the middle of what some call the “Demilitarization of Europe,”<sup>53</sup> needs a new strong partner for key technologies and capabilities to be maintained and to avoid the loss of more than 30,000 highly-skilled jobs.<sup>54</sup>

Given the still predominant Buy American policy, direct sales of German weapons systems to the U.S. Armed Forces will probably remain rare exceptions for the time being. Instead, the fact that the German Ministry of Defense seems to be willing to buy more available weapon systems off the shelf might open up market opportunities for the U.S. defense industry in Germany, even though the total defense budget is shrinking.

German budget constraints on the one hand, and the harmonization of military requirements across the Atlantic on the other, remain challenges to possible new intergovernmental projects. Jointly developed defense systems under a government-to-government agreement will remain exceptions until the revitalization on German-U.S. armaments cooperation is on the top agenda of both governments.

Teaming arrangements with U.S. prime contractors for specific U.S. programs will be politically easier, raising less concerns or resistance from the U.S. Congress. At the same time, the German government would also have to allow more U.S. participation in the German defense market. The cost-effectiveness of these industrial arrangements will depend to a considerable degree on the regulatory framework that governments agree on. From an academic standpoint

it is hard to find arguments against the greater use of economies of scale among allied nations.

Germany must take the initiative and demonstrate what its industry can bring to the table. This should be based on a clear assessment of its current status and capabilities. To be successful in the U.S. market, long-term investments and commitments are necessary and the many mid-sized German companies in particular will need more support from the federal government.

Future cooperation should be based on joint military requirements and technological capabilities, not on "Political Engineering," or cooperation for the sake of cooperation.

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- over 700 separate information exchange program annexes under agreements with 26 different countries,

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