

# SWP Research Paper

Stiftung Wissenschaft und Politik  
German Institute for International  
and Security Affairs

*Joachim Rohde*

## Armament in Europe

Constraints and Opportunities to Optimise  
European Armaments Processes

S 25 (english version)  
June 2004  
Berlin

**All rights reserved.**

© Stiftung Wissenschaft und  
Politik, 2004

**SWP**  
Stiftung Wissenschaft und  
Politik  
German Institute for  
International  
and Security Affairs

Ludwigkirchplatz 3-4  
10719 Berlin  
Germany  
Phone +49 30 880 07-0  
Fax +49 30 880 07-100  
[www.swp-berlin.org](http://www.swp-berlin.org)  
[swp@swp-berlin.org](mailto:swp@swp-berlin.org)

ISSN 1611-6372

# Table of Contents

5	<b>Problems and Recommendations</b>
7	<b>Introduction</b>
9	<b>Does Europe need Independent Defence Technological and Industrial Capabilities?</b>
10	The Importance of DTIB for Independent Military Action
13	Independent Development of Military Instruments and the Importance of the DTIB
16	<b>Inadequate Procedures and Political Constraints in Europe</b>
16	Armament in Europe: Current Situation
20	<b>European Options for Action</b>
20	Optimising the Status quo
21	<i>Key Developments for the Market and the Defence Technological and Industrial Base</i>
22	<i>Consequences</i>
23	Deepening of the Armaments Cooperation in a European “Core”
24	<i>Key developments for the market and the DTIB</i>
25	<i>Consequences</i>
26	<b>Conclusion</b>
26	<b>Abbreviations</b>



**Armament in Europe.  
Constraints and Opportunities to Optimise  
European Armaments Processes**

After a lengthy tug-of-war, the Foreign Ministers of the EU member states agreed in mid June the key elements of the European Defence Agency which is to be newly established. The draft European Constitution and the European Council in Thessaloniki in June 2003 had already outlined the comprehensive scope of tasks of the Agency, with which great hopes have been associated ever since. The Agency is to help improve the European military capabilities and intensify armaments cooperation in Europe. However, the visible reluctance of the EU member states to endorse not only the administrative but also an operational budget for the Agency and thus granting it a certain degree of autonomous capability to act also provoked manifold critical reactions.

The current discussions on the Agency show that by its establishment as such little has been gained. Whether it will actually be able to fulfil the range of tasks entrusted to it and as a result justify the hopes placed in it largely depends on the willingness of its members to develop armament processes and their political framework conditions in Europe on the basis of common objectives in a truly joint manner.

This willingness is anything but certain. Although today there is, on the one hand, wide agreement on the fact that Europe's military capabilities do not match her security policy ambitions. There is also a general understanding that Europe's Defence Technological and Industrial Base (DTIB) must be retained because it is a vital prerequisite for an independent European Security and Defence Policy (ESDP) and an independent European capability for military action. In the light of the budget constraints in the individual European states maintaining the DTIB would require to use the available resources a lot more efficiently. This can only be achieved by pooling research and technology, and in particular the development and procurement activities, in the European states and systematically reorganising the European DTIB towards transnational work sharing and specialisation. Despite certain initial steps no substantial progress has been made to date.

In the past, the numerous roles of the DTIB in the various fields of national politics presented the biggest

obstacle to such a transnational approach for the development and manufacture of military equipment in Europe. If the European states insist in designing armaments and defence industry policy primarily on a national basis, there will be little room for improving this situation.

Against this background the study will not examine the perspectives of the European Defence Agency itself (this will be done in a subsequent study), rather the development options of armaments in Europe in general, i.e. the environment in which the Agency will have to operate. It discusses two development options deemed realistic and arrives at the following results and recommendations:

- ▶ Given today's political environment the political functions of the DTIB, and its special status based upon them, can no longer be used to justify the inefficiency of armaments in Europe. An efficient DTIB with all its special qualities can just as easily be organized on a European level, while even maintaining national options for military action. A European solution would have additional, far-reaching benefits for all relevant policy areas without bearing hardly calculable risks from the nations' individual point of view.
- ▶ A further optimisation of the status quo, i.e. promoting programme cooperation and increasing their efficiency also with the help of the European Defence Agency, will not be sufficient to support European security and defence policy ambitions. Even though a policy of that kind will lead to limited gains in terms of efficiency it will not enable Europe to preserve a broad, efficient and competitive DTIB in the medium and long term. On the contrary, it is likely to contribute to a toughening of the mutual crowding-out competition in Europe where governments try to turn their own systems companies into focal points of the evolving European centres of competence. From a national point of view this has the limited advantage that the national costs to rationalise the DTIB could be passed on to European partners while unilaterally burdening them with industrial as well as defence and security policy dependencies. From the European perspective this would also have the effect that it would become impossible to preserve a European DTIB that would at least half-way match the American competitors. As a consequence, the majority of national markets in South-, East- and Northern Europe would be dominated by US companies. They would also play a prominent

role on the Central European markets, making an independent ESDP highly unlikely.

- ▶ The deepening of European armaments cooperation required to implement the ESDP ambitions will have to be promoted by a smaller group of EU member states. Within this "core" capability and force planning would have to be closely coordinated, if not, as a rule or concerning specific aspects, developed jointly. In addition, the members would have to establish their "own" common market and develop common procurement rules. Furthermore, they would have to agree competition rules, e.g. concerning antitrust law and state aid as well as a common set of rules for intra-community transfer and export into non-EU member states. The cooperation in armaments should also be expanded to comprise the formulation of a common policy to control developments in the DTIB. Thus, the DTIB in this European "core" could be based on a common market with harmonised or even common rules. Synergies and economies of scale could be achieved by both the mutual demand (and consequently larger quantities) and by the fact that a market should exist for industries to position themselves transnationally following economic and business aspects, however supervised by a competition authority and a strong procurement agency. This should lead to significant increases in productivity and the strengthening of the European DTIB. Provided it shows sufficient internal flexibility, the Defence Agency could play a creative role in all these areas.

# Introduction

The calls for a radical improvement of European armaments cooperation or even a common European defence market have been repeated incessantly over the past decades.<sup>1</sup> They are thus older than the EU's Common Foreign and Security Policy (CFSP) and definitely older than the European Security and Defence Policy (ESDP). The background to these appeals have always been and still are the marked shortage

of the European nations' resources and their inadequate efforts to modernise their armed forces' equipment, but also requirements for interoperability and standardisation.<sup>2</sup>

As early as the end of the 1980ies, beginning 1990ies investigations highlighted the huge cost savings that could be achieved through a Europeanisation of the armaments organisation, e.g. the integration of military equipment into the EU internal market.<sup>3</sup> The drastic cuts in European defence budgets in the course of the 1990ies—especially in capital expenditure—intensified the calls for a coordinated defence industry, and for the first time parts of industry also strongly advocated a European defence market.<sup>4</sup>

1 The establishment of the IEPG (Independent European Project Group) in 1976 already pursued the objective of improving European armaments cooperation; refer to Hans-Günter Bode, *Rüstung in der Bundesrepublik Deutschland* [Armaments in the Federal Republic of Germany] (Regensburg 1978), pp. 98–99. In the 1980ies in particular, the IEPG worked on the numerous facets of this topic and explored possibilities to optimise the competitiveness of Western European defence industries. The so-called Vredeling Report, drawn up by an independent IEPG group of experts in 1986 with the title *Towards a Stronger Europe*, became particularly famous. Following the revitalisation of the WEU in the second half of the 1980ies the intention to preserve the technologically progressive industrial basis in Western Europe and to strengthen armaments cooperation was strongly articulated; refer to para III.a.4 of the political declaration of intent of the Haag WEU programme of October 1987, in: *Western European Union—History, Structures, Prospects*, in: WEU Press and Information Service, 4 (1994), p. 7. The European Commission which in 1991 ventured a first, tentative approach with the study *Dual-use Industries in Europe* and then in 1992 commissioned (but at the time did not dare to publish) the study quoted in footnote 3 finally went public in 1997 with the so-called *Bangemann Report* as an ardent advocate of a Europeanisation of armaments (European Commission, *Implementing European Union Strategy on Defence-related Industries*, COM (97) 583, Brussels, 12 November 1997). The issue experienced new impetus in scientific literature especially in the first half of the 1990ies, refer to e.g. William Walker and Philip Gummert, *Nationalism, Internationalism and the European Defence Market*, Paris: Institute for Security Studies of the Western European Union, 1993 (Chaillot Paper 9); Andrew Moravcsik, “The European Armaments Industry at the Crossroads,” *Survival*, vol. 32, no. 1 (January/February 1990), pp. 65–85; Igor Aschersleben, “Europäischer Rüstungsmarkt oder Euro-Protektionismus?” [European Defence Market or Euro-Protectionism?], in: *Europäische Sicherheit*, vol. 40, no. 12 (December 1990), pp. 688–691, or Wilfried Karl (ed.), *Rüstungskooperation und Technologiepolitik als Problem der westeuropäischen Integration* [Armaments Cooperation and Technology Policy as a Problem of Western European Integration] (Opladen 1994).

2 Refer to Jan Feldman, “Collaborative Production of Defence Equipment within NATO,” *The Journal of Strategic Studies*, vol. 7, no. 3 (September 1984), p. 282.

3 Keith Hartley for example outlined as early as in 1987 the various potentials to cut costs that could be achieved by improving armaments cooperation or establishing a common market; Keith Hartley, “Public Procurement and Competitiveness: A Community Market for Military Hardware and Technology?,” *Journal of Common Market Studies*, vol. 25, no. 3 (March 1987), pp. 241–242. In a frequently quoted study commissioned by the European Commission in 1992 (of which only a summary was published in 1994) he and A. Cox arrived at the conclusion that the introduction of transnational competition in tendering for armament orders could lead to savings between 6.5 and 9.3 billion ECU; see European Commission, *The Cost of Non-Europe in Defence Procurement*, quoted from: Pierre de Vestel, *Defence Markets and Industries in Europe. Time for Political Decisions?*, Chaillot Paper 21 (Paris: Institute for Security Studies of the Western European Union, 1995), p. 93. In their study: *The UK Industrial Base: Developments and Future Policy Options* (London 1989), p. 78, Trevor Taylor and Keith Hayward however assumed that in addition to savings through competitive tendering (which they estimate at 10%) even greater efficiency gains could be realised as a result of pooling the demand and the consequent larger quantities to be procured.

4 Compare speeches delivered by different CEOs of European aerospace companies, e.g. Manfred Bischoff (chief executive at Daimler-Benz Aerospace AG), “Aerospace Industry on Its Way into the 21st Century,” and Richard Evans (chief executive at British Aerospace Limited) on the occasion of a European Parliament and European Commission symposium in Brussels on 5 November 1996, in: *Dokumente der Luft- und Raumfahrtindustrie*, 14 (1996), or the speech held by Wolfgang Piller

However, no substantial improvement can be recorded to the present day. Although European programme cooperation increased, at least wherever it could not be avoided for technical or financial reasons; the aforementioned increase in productivity that could have been achieved in Europe by consolidating the demand on the customers' side and specialisation based on work sharing on the part of industry was not realised because the nations in question insisted on an extensive definition of their national sovereignty.

Since 1992 the member states of the European Union have endeavoured to set the stage for a CFSP, and since 1999 also for ESDP. This raises the question whether and to what extent the realisation of the European nations' security policy ambitions will lead to a noticeable increase in efficiency of European armaments processes which has not materialised so far. First, because such an increase is one of the few options available in order to release additional resources urgently needed to implement the ambitions, second, because without synergy it will be almost impossible to preserve a competitive defence technological and industrial base (DTIB) in Europe.

The study therefore starts by examining whether the political functions of the DTIB call for its preservation and intensification on the European level in order to enable Europe to realize her security and defence policy endeavours. In parallel it has to be investigated whether, in the face of the predominant national orientation, these very functions do not pose an obstacle to a Europeanisation of armaments. In other words, the study will look into the question whether the political reasons to preserve and extend European DTIB capabilities and thus a Europeanisation of armaments are not at the same time the reasons which, given the present political framework conditions, complicate or even prevent such a Europeanisation.

Based on this analysis of the security and defence policy roles of the DTIB the study describes the shortfalls in European armaments cooperation, analyses the constraints and outlines options for action.

(CEO at Daimler-Benz Aerospace AG) on the occasion of the Second Eucosat Symposium in Bonn on 20 September 1995, "Europäische Luft- und Raumfahrtindustrie schafft Wettbewerbskraft für den 'Standort Europa'" [European Aerospace Industry creates Competitive Strength for the "Location Europe"], *Dokumente der Luft- und Raumfahrtindustrie*, vol. 10 (1995), pp. 7–11, and in particular his presentation to the study forum of the Deutsche Gesellschaft für Wehrtechnik (German Society for Defence Technology) in Bonn on 5 March 1998, "Europäischer Rüstungsmarkt—Fiktion oder Vision?" [European Armaments Market—Fiction or Vision?], *Dokumente der Luft- und Raumfahrtindustrie*, vol. 2 (1998).



## Does Europe need Independent Defence Technological and Industrial Capabilities?

In order to be able to pursue an independent European Security and Defence Policy the Union requires appropriate military instruments which enable it to take action in these policy fields.<sup>5</sup> “Independence” in the context of this study is understood as the capability to act in a security and defence policy field and to be able to develop one’s own military instruments without depending on non-European actors to an extent that would block this European action and seriously impair the development of European military capabilities. The inversion of the argument then implies that limited dependency on non-European actors with controllable implications are indeed compatible with an independent ESDP.<sup>6</sup> One prerequisite for an ESDP understood in this way are own European military capabilities in the task areas considered to be

relevant. To this end, a wide range of efforts are currently undertaken on the European level, they are, however, not the subject of this study.

Many people argue that a competitive defence technological and industrial base (DTIB) was a second prerequisite for an independent ESDP and independent military capability to take action by the Europeans, since this would have a decisive impact on governments’ security and defence policy options to take action.<sup>7</sup> This potential connection between security and defence policy options to take action on the one hand and the DTIB capabilities on the other hand would not only justify the need for a European DTIB, but also explains why many European states find it so difficult to let their national DTIBs merge into a European one. Because to the present day the question whether the national states are prepared to establish the basis for a powerful and competitive European DTIB, i.e. to permit and promote transnational share of work and specialisation<sup>8</sup> as this would also lead to transnational political dependencies. These possible dependencies affect several areas of foreign, security and defence policy (see p. 14–16 below). It is therefore a vital prerequisite to explore them in depth in order to outline development options to deepen European armaments cooperation. First, we look at the implications of industrial dependencies on the short-term military ability to act. Then we have to investigate to what extent own DTIB capabilities are a condition for the medium and long term (material) organisation of the own military instruments and other areas of foreign and security policy. Finally, we will have to examine how serious these dependencies are and what

<sup>5</sup> In its Cologne declaration of 1999 on Common European Security and Defence Policy the European Council stipulates that “to *fully assume* its tasks in the field of conflict prevention and crisis management the EU must have at its disposal the appropriate capabilities and instruments”. Furthermore “the Union must have the capacity for *autonomous action*, backed up by credible military forces” (highlights in italics by the author); Cologne European Council, 3.–4.6.1999, Annex III to the Presidency Conclusions: Declaration of the European Council and the Presidency report on strengthening the European common policy on security and defence, p. 37. According to the author’s knowledge, both terms (fully assume, autonomous action) have not been clearly defined to the present day.

<sup>6</sup> In the face of their serious capability gaps the European member states were right from the start aware of the limitations of an *autonomous* ability to take action and their dependence on the availability of NATO (i.e. US) capabilities; refer to Denise Groves, “The European Union’s Common Foreign, Security, and Defence Policy,” *BITS Research Report* 00.3 (November 2000), p. 8. The definition of independence stated here is therefore to be understood as a projected goal which can only be obtained once the military command and control capability and political ability to take decisions has been established and vital European capability gaps have been filled; Refer in particular to Reinhard Rummel, “Die ESVP als Instrument autonomen Handelns der EU” [ESDP as an Instrument for Autonomous EU-Action], in: Erich Reiter, Reinhardt Rummel, and Peter Schmidt (eds.), *Europas ferne Streitmacht. Chancen und Schwierigkeiten der Europäischen Union beim Aufbau der ESVP* [Europe’s Faraway Troops. Opportunities and Challenges for the European Union in Establishing an ESDP] (Hamburg 2002), pp. 172–178.

<sup>7</sup> This connection is implicitly established in the Declaration of the Cologne European Council (refer to fn. 5), spelled out even clearer in point 4 of the joint declaration on the occasion of the British-French summit at St. Malo, December, 3–4 1998.

<sup>8</sup> Share of work and specialisation in this context does not mean the formation of a system of European monopolistic suppliers through the free play of “market forces”; rather an attempt should be made to retain several suppliers on the European level, and thus allow for competition in the future, too, in those areas where demand permits this and governments consider it to be worthwhile (see below).

needs to be done to compensate for them on the European level.

### The Importance of DTIB for Independent Military Action

Throughout the entire life cycle of military equipment the DTIB is of defence policy importance. Beginning with the research into new technological possibilities to solve military problems this continues with the concrete development and manufacture of military equipment to maintenance and upgrading of this equipment after introduction into service. Interactions between DTIB capabilities and immediate military possibilities to act stem in particular from the DTIB's role during the in-service phase and in the case of demand at short notice for new equipment or equipment upgrades.<sup>9</sup> If industry presented a significant factor in preparing, sometimes even conducting, large-scale military operations in the past, the dependencies of the armed forces associated with this are likely to increase considerably in the future. Budgetary constraints above all lead to industry being more and more often commissioned for certain services and the armed forces becoming increasingly dependent on industrial support in the daily routine. This statement does not apply to all type of operations to the same extent. At the bottom end of the scope of the Petersberg tasks for example the armed forces' dependencies are extremely limited, however, they increase with duration and intensity of the missions and are very distinct in intensive combat activities of longer duration. Guaranteeing the availability of DTIB capabilities before and during an operation is thus an important pillar of the military capability to act.

The dependencies stretch across four areas: Maintenance of fielded equipment, covering the augmentation demand for spare parts and ammunition, modification of existing equipment and development and production of new systems and components at short notice.

Currently, obtaining a sufficient level of operational status of technically complex systems sometimes requires considerable *maintenance* efforts. This is particularly true if the equipment used had been

<sup>9</sup> Refer to Joachim Rohde, *The Roles of Arms Industries in Supporting Military Operations*, SWP-AP 3045 (Ebenhausen: Stiftung Wissenschaft und Politik, October 1997), containing numerous examples of industrial support in the preparation and conduct of military operations during the Gulf War 1991.

stockpiled or had not been used or maintained regularly for other reasons. As we cannot rule out that in view of acute budgetary problems spare parts provisioning might decrease to an extent where an offset through optimised stockpiling will no longer be possible, industry will have to step up the spare parts production especially for larger operations so that the military user can maintain the equipment in a suitable manner.<sup>10</sup> In addition, new maintenance problems will occur if the equipment is used in tactical, climatic or geographic conditions for which it was not designed. In order to then quickly remedy shortfalls in equipment and develop appropriate maintenance concepts the manufacturer's system know-how is usually required. The maintenance needed for equipment to be newly developed can be reduced through corresponding design (e.g. optimisation for a wide operational spectrum, high reliability of components). If, however, the maintenance effort can be reduced dramatically, the question arises whether it is sensible to duplicate the existing infrastructure with industry for organisational maintenance. Especially for technically complex systems a lot can be said for a two-level maintenance concept with maintenance primarily carried out by industry and the field units only replacing parts.<sup>11</sup> The equipments' required operational ready state would then depend even stronger on timely support by industry.<sup>12</sup>

Type and scope of the *augmentation demand for spare parts and ammunition* and, as a consequence, quality and extent of dependence on support by industry are also determined by financial, technical and operational factors. On the one hand, it has already become military routine that equipment cannot be fully maintained because of shortage of spare parts in peacetimes; if this equipment is to be used in operations or the field units intensify exercises in preparation of a

<sup>10</sup> For products whose production has been discontinued this requires minimum reproduction quantities, so that "cannibalisation" may be more economical, at least as long as only small contingents are deployed.

<sup>11</sup> A similar concept is currently being introduced with the German Air Force for the Eurofighter; refer to Herbert May, "Neue Konzepte für die Eurofighter-Logistik" [New Logistics Concepts for Eurofighter], in: *Soldat und Technik*, vol. 46, no. 3 (March 2003), pp. 30–36.

<sup>12</sup> For the purpose of this study it is largely irrelevant how the access to the corresponding industrial staff (e.g. assigned soldiers or reservists) is organised in conflicts or actual operations. The decisive aspect is that a long term availability of industrial (maintenance) capabilities and infrastructure is required to render services.

mission this requires an increased spare parts production.<sup>13</sup> On the other hand, unexpected wear and tear due to operational reasons can occur with certain components, e.g. if the equipment had not been optimised for the deployment area, is inferior to enemy systems and/or mission tactics or has to be employed for tactical or operational tasks for which it was not designed. The ammunition consumption, too, cannot be calculated accurately and again the budgetary pressure will most likely lead to a reduction of stockpiling. Although the augmentation demand could be considerably reduced through sufficient stockpiling of spare parts and ammunition for a wide operational spectrum with appropriate margins of safety, for limited operations possibly even down to zero, this kind of stockpiling cannot be expected due to budgetary constraints in the majority of Western states. And even if this was the case it could not be ruled out that in determining prospective quantities wrong assumptions are used as a basis or that the given planning framework (e.g. 30 days force sustainability) proves insufficient. In these cases industry will have to step in. This is why from an armed forces' point of view a certain industrial augmentation capability will have to be guaranteed in future, too.

The *modification of fielded equipment and development and production of new systems and components at short notice* are additional areas where armed forces depend on support by industry. In future, as was the case in the past, it will not be possible to procure expensive weapon platforms with all major equipment components or sufficient armament systems right from the outset—these components will then have to be quickly retrofitted and thus procured in the instance of demand.<sup>14</sup> With older equipment we experience more

and more often that necessary adaptation or upgrade measures are postponed or cancelled, which would also have to be made up for rapidly should they be required.<sup>15</sup> In view of existing equipment deficits the dependence across the entire operational spectrum is today comparatively high. It can be reduced to the same degree that new equipment is designed or at least made adaptable to meet a wide range of climatic operational conditions and tactical operational concepts and suitable upgrading measures are carried out for older equipment and/or adequate quantities of components are stockpiled for both types of equipment. This does not apply to modifications required as a consequence of unexpected enemy capabilities. In future, this will mainly concern high-tech and software components of state-of-the-art equipment.

When discussing these dependencies of armed forces on support by industry in preparing and conducting military operations<sup>16</sup> at least two options are conceivable:

- ▶ widest possible spreading of the dependencies across several, also foreign companies, or
- ▶ systematic involvement of selected (presumably mainly national) companies in contingency planning for future conflicts.<sup>17</sup>

The first option is only feasible where, with a view to a specific mission, existing equipment shortfalls are to be met by procuring new equipment at short notice. Maintenance (including spare parts delivery) or modification of fielded equipment will largely have to be carried out by the companies which delivered the equipment. In most circumstances the armed forces

air campaigns in Kosovo until their own system could be fielded; refer to UK Parliament, Select Committee on Public Accounts, Appendix 1: Supplementary Memorandum Submitted by Ministry of Defence (PAC 1999-200/101).

<sup>15</sup> The British Challenger-2 main battle tanks for example had to be fitted with special sand filters and other devices for the operations in Iraq in order to reduce the penetration of dust into the engines; UK Ministry of Defence, *Operations in Iraq—Lessons for the Future* (London 2003), p. 23.

<sup>16</sup> The example of the British armed forces who, in the preparatory phase to the most recent war in Iraq, approved and invited tenders for 190 so-called Urgent Operational Requirements with a contract value of 510 million £, including requirement to fill equipment gaps that had been known for a long time, demonstrates the dimension this dependence can assume; *ibid.*, p. 6.

<sup>17</sup> As a result of the lessons learned during the 1991 Gulf War this issue was considered in Great Britain already in the mid-1990ies; refer to UK Parliament, Defence Committee Fifth Report (DefCom): *Implementation of Lessons Learned from Operation Granby* (House of Commons, 1994), p. 83.

<sup>13</sup> This has long been a fact with many European armed forces. The funds for spare parts provisioning were cut back to a level where the operational status of equipment in large parts of the units is low despite cannibalisation; for the German Bundeswehr refer to annual reports by the Parliamentary Commissioner for the Armed Forces and the relevant statements on materiel and spares situation. In autumn 2002 the French parliament also complained about inadequate spare parts supply, claimed to be one of the main reasons for the low operational ready rate; Pierre Tran, "Report Offers Ways to Improve State of French Weaponry," *Defence News*, November 4, 2002, p. 3.

<sup>14</sup> In very urgent cases this will have to be complemented by conducting a market survey of existing equipment and quickly filling capability gaps by procuring existing systems. Often this will mean having to fall back on equipment from foreign countries. The British Air Force for example procured American air-to-surface rockets as an interim solution for the

will therefore have to fall back on the second option. There it should be sufficient to restrict oneself to the systems companies, the most important suppliers of assemblies and few key components suppliers. The objective would be to develop procedures and lines of communication between armed forces and industry which are indispensable for efficiently carrying out industrial support functions before the outbreak of crisis and conflicts and to secure them contractually—if required. Planning should also include the deployment of teams from industry to the operational area which might well become necessary to remove unexpected equipment shortfalls or to install modification sets. The involvement in relevant planning activities will require the defence industries concerned to continuously monitor their stockpiles as well as the maintenance and production status of certain key elements and components.

A policy of this kind demands conscientious cooperation and support by industry, their staff and suppliers. It would therefore be necessary to select companies of which it can be assumed that they will perform their support tasks in a reliable manner also in the case of crisis and war. As a consequence, the selection of companies will, as a rule, be based on long term experience of cooperation. The relationship between armed forces and these companies will henceforth be very close. Whether, and to what extent, competitive tendering can be maintained under such conditions will largely depend on the size of the market and the complexity of the equipment in question.

Military options for action are thus also linked to the existence of industrial capabilities in all vital areas. In the long term we will only succeed in preserving such capabilities in Europe, if technological competence and economic competitiveness of the European industries are strengthened by cross-border restructuring and rationalisation. The development of an industrial culture of this nature is however impeded by the fact that the nation state in Europe is and - following the wish of most European governments—should remain the authoritative body for military action. If we accomplished a cross-border reorganisation and adjustment of European defence industries' capacities this would imply strategic dependencies on foreign companies,<sup>18</sup> without

<sup>18</sup> This refers to companies abroad, not defence companies with foreign shareholders in Germany. The dependency problem for the medium and long term ability develop military instruments may, however, also apply to domestic

secured possibility to fall back on their capacities.<sup>19</sup> In the case of ad-hoc coalitions a situation could occur where the armed forces of one coalition state would depend on defence industry support by a country which, due to an own military commitment and consequent full utilisation of their home industry, can provide only limited support, grants it only reluctantly for political reasons or even refuses it on principle. The opportunities of cross-border rationalisation are therefore determined by the degree of autonomous capability for military action sought by the individual European governments:

Governments who wish to retain their ability to conduct military operations without political and in particular massive industrial support coming from other European states, or who are not prepared to be drawn into military engagements of others via a promise of industrial support will hardly be inclined to allow the dependencies entailed in transnational restructuring to arise.<sup>20</sup> States rejecting such a support, however, would rapidly be excluded from the network of industrial share of work in Europe and become isolated. The development of a European security and defence policy and the associated numerous consultation and coordination efforts should also counteract such an attitude of refusal and increase the pressure in favour of common action. In the long term it can therefore be expected that a refusal to support will be the exception rather than the rule.

The states that are concerned about independent military options for action over and above ESDP are, however, more likely to try and promote their own industries in this European restructuring process in a way that these will develop into the focal points for the European Centres of Competence to be established and thus will be the locations where distinct development and manufacturing competence will be pooled on a European level, so that the required adjustment

defence companies if reliability and—in case this affects reliability—the property situation are uncertain.

<sup>19</sup> Support services by foreign companies can also be secured by means of contracts. A certain political risk will always remain, even if this could be limited by a high degree of mutual dependency in Europe. For this reason this argument applies mainly to the transatlantic context.

<sup>20</sup> The case of the British “arms embargo” on Israel at the beginning of 2003 highlights that a refusal to render support services or deliveries can have serious consequences. The British refusal to deliver spares for the Phantom-II fighter-bomber's ejection seats threatened to no longer permitting these aircraft to be deployed; CBS News.com, 3.1.2003 <[www.cbsnews.com/stories/2002/12/18/world/main533437.shtml](http://www.cbsnews.com/stories/2002/12/18/world/main533437.shtml)>.

of capacities will be at the cost of other locations.<sup>21</sup> As a consequence, only the partners would suffer from militarily significant industrial dependencies. From the point of view of the European states with the most significant military and armaments potential this may appear to be the ideal security and defence policy solution, from the point of view perspective of other European players a network of mutual industrial dependence would certainly be preferable, because only in a system of this kind would the political pressure to meet delivery obligations be sufficiently high.

*Conclusion:* In future, armed forces will depend on support by industry when preparing large-scale military operations. For a transitional period this will also be true for limited operations. Unexpected maintenance problems, above all equipment deficiencies and shortfalls as well as miscalculated spare parts and ammunition stockpiling can only be corrected by timely and adequate industrial support in the case of a specific crisis or in the preliminary stages of an emerging operation. Securing the availability of industrial capabilities during operation preparation will become a vital element of the military capability to act. Companies have to be identified which will reliably perform their support tasks also in cases of crisis and conflict and, if required, on the ground. As a consequence of this requirement we should see—wherever it has not happened already—the development of exclusive relationships between armed forces and a number of national enterprises. This connection could restrict the development of a European DTIB, if major states continue to direct their focus on a national ability to take action in ad-hoc coalitions and refuse to become dependent on other European states. But since these very states can no longer fund a sufficiently diversified national DTIB they will not be able to avoid supporting the inevitable industrial dependencies through political or contractual measures as best possible. The corresponding contracts on delivery and support services between national armed forces

<sup>21</sup> So far this was prevented by national contract award and in cooperation programmes by negotiating industrial work packages following the “Juste-retour” principle (see also fn. 31). Since in future industrial cooperation will dominate not accompanied by MoUs on the political level the aspect of competing locations and crowding-out competition will gain in importance. Thus, the national political framework conditions in which the companies operate will become a decisive factor for intra-European competition for the locations of the future “European” Centres of Competence.

and European companies have to be complemented by a contractual network between European governments which guarantees delivery and support services also in the case of a conflict. Such a “system” is required at least as long as Europe is lacking the security and defence policy framework for common military action and an integrated armaments policy that would render such dependencies irrelevant from a military point of view.

### **Independent Development of Military Instruments and the Importance of the DTIB**

However, not only the ability to retain independent options for military action depends on the availability of own defence technological and industrial capabilities, this is equally true for the modernisation of the forces. It is necessary to preserve and maybe even expand a DTIB primarily because the functions of a DTIB are to develop, manufacture, and repair military equipment, and to maintain and improve the combat effectiveness of military equipment. Of course, it is possible to procure military equipment abroad (from non-EU countries). There are, however, at least at a cursory glance, several arguments in favour of a qualified national (or European) industry on which the national (or European) forces could fall back on at any time:

1. The further conceptual development of the forces and the political options to act associated with these instruments are strongly influenced by technological advances and the equipment available in the future. Anyone who wants to set the right course in due time in order to be able to meet the own military requirements by supplying adequate equipment in the medium and long term, depends on the know-how that is primarily available in industry.
2. In order to satisfy requirements without a national (or European) industry, in some circumstances the forces would have to procure equipment which is optimised for different tactical or operational concepts.<sup>22</sup>

<sup>22</sup> If the national industry relies heavily on export, this sentence could however also apply the other way round. In order to be successful on the exports markets that are crucial for survival, industry will offer equipment to their armed forces which is not optimised for their specific requirements but which is geared to what can be sold best on these markets.

3. In some cases there will be no access to the latest technologies because of governments or companies holding back the most current generation of systems for security or economic reasons.
4. The procurement authorities' ability to assess tenders for equipment from foreign (non-EU) companies with respect to technical and economic aspects will in the long term essentially depend on a continuous exchange of information with industry. Due to the restricted technology transfer with foreign, especially non-European companies, this can hardly be guaranteed.
5. The much discussed rationalisation potential, for example to be found in industry outsourcing maintenance services or in decreasing spare parts provisioning while ensuring just-in-time<sup>23</sup> deliveries, can only be realised if the corresponding industrial capabilities and capacities are available. Therefore, certain development and rationalisation options of the forces on national and European level depend on the existence of an adequate DTIB.
6. The DTIB is also the instrument with which governments could influence defence industry developments and relationships in a European and transatlantic environment, for example with the objective to create a balance between industrial dependencies.<sup>24</sup> If project co-operations within Europe or with the US should also in the future dominate the armaments sector, DTIB capabilities will be required in order for a state to be able to participate in this co-operation.
7. Apart from this, the own defence industrial capabilities generate the know-how required for being able to assess the defence industrial capabilities of the enemy. This makes them an important early-warning instrument.

The fact is, only few of these arguments are sound. The considerations regarding the conceptual further development of the forces and thus regarding the medium and long term supply of equipment (point 1) are more and more the same in the most important

<sup>23</sup> Considering the imponderables inherent in defence planning and military logistics, just-in-time will be feasible only to a much lesser extent than in the civil sector.

<sup>24</sup> See for example the rationale for the European radar programme SOSTAR-X, in: *Griephan-Briefe*, vol. 37, no. 50 (2001), pp. 2-4. In general, this argument is less and less valid since there are not enough new armaments programmes which will allow a political control of the necessary industrial adaptation processes. The latter will thus increasingly follow a entrepreneurial and less a security policy calculations.

European arms manufacturing states; therefore, the concepts of foreign suppliers for new equipment are often useful and can easily be integrated. Due to the military tasks and the resulting capability requirements converging, it becomes less and less likely that the equipment developed in these states will be optimised for different tactical concepts (point 2). It is necessary, though, that also foreign companies are involved in considerations on new product solutions at an early stage. While the US in many cases actually denies access to state-of-the-art technology, this is usually not the case in Europe. In view of the tight budgets, it is also questionable whether this will always be a dominant factor when it comes to equipment for the European forces. And due to the lack of potential enemies, the argument that an own national DTIB should be indispensable as an early-warning instrument (point 7) is hardly valid anymore.

Altogether, these reasons for retaining national DTIBs in Europe are not really convincing. They can hardly offset the advantages of a Europeanisation of the armaments sector. This is even true in the transatlantic context, as least as long as the forces' requirements on both sides of the Atlantic do not considerably drift apart. If the *defence policy* functions of the DTIB regarding the independent further development of the forces does not pose an obstacle to a further Europeanisation one has to ask oneself whether this does not apply to other armament functions as well.

Apart from the functions in the area of defence policy, the DTIB could also assume functions in the fields of *security* and *foreign policy*. Providing military hardware is the prerequisite for a medium and long term influence on the political and military options for action of alliances or ad-hoc coalitions. The DTIB delivers the equipment for the support of allies or for influencing regional balances of power and makes it thus possible to establish defence cooperation as a symbol of close political relations.

Beyond these primary tasks, the DTIB performs also secondary political functions, which in individual cases may be equally important. It can, for example, support foreign trade policy by using arms exports to pave the way for economically more important exports of civil goods. It can be an instrument of technology and industry policy if it is used for promoting important branches of industry—provided the companies are active in the civil and the military area and thus make cross-subsidizing and financial (or technological) spill-overs possible in order to increase the competitiveness of their civil branch. It is also a means

of economic and structural policy because it secures jobs in underdeveloped regions. These secondary functions of the DTIB can be obtained by developing and manufacturing equipment or equipment components at home as well as through offset arrangements when procuring equipment abroad. It has, however, been obvious for several years that due to the partly dramatic budgetary constraints many of these secondary functions have an only limited influence on armaments processes today.

*Conclusion:* In the past, the numerous roles of the DTIB in the various areas of national policies presented the biggest obstacle to a transnational approach for the development and manufacture of military equipment in Europe. If the European states insist in designing armaments and defence industry policy primarily on a national basis, there will be little room for improving this situation. Given today's political environment the political functions of the DTIB, and its special status based upon them, can no longer be used to justify the inefficiency of armaments in Europe. An efficient DTIB with all its special qualities can just as well be organised on a European level, while even maintaining national options for military action. What is more, a European solution would have additional, far-reaching benefits for all relevant policy areas without bearing hardly calculable risks from the nations' individual point of view:

- ▶ The security of supply and the confidence of the forces in a timely and adequate support from industry, which could become the prerequisite for the capability for military action in critical situations, would be strengthened because a European solution would significantly improve the ability of the DTIB to compete and survive. The Europeanisation of the DTIB would create a transnational system of mutual dependencies in which the mutual support from industry would be very likely in case of crisis and conflict. Altogether, considering the inevitable sizing-down processes in industry, the degree of security of supply on a European level would be higher than it will be possible on national levels.
- ▶ The ability to further develop military instruments independently would also be strengthened by a European solution. An efficient and competitive DTIB would be able to develop innovative products for closing capability gaps and to respond better to European requirements than the national companies that are more dependent on export. The Euro-

pean forces would also gain access to the latest technologies and in the long term the customer would be able to secure his power of judgement by exchanging information with the DTIB. It would be difficult to achieve these advantages on national level alone in the future.

- ▶ In the end, lastingly competitive companies will serve the goals of individual governments or regions in terms of economic, industry and technology policy better even if some regions will feel the negative effects of rationalisation. Given the fact that capacities will be adjusted in the national context too because national budget can no longer guarantee a survival due to lack of resources, this would probably be the case anyhow.

## Inadequate Procedures and Political Constraints in Europe

### Armament in Europe: Current Situation

Armaments procurement and most areas of armaments policy are still sole responsibility of the individual European nation states. The sovereignty in this field of policy has not yet been transferred to European institutions. There is also no systematic coordination of armaments and armaments industry policy on European level. This is all the more problematic since there is a complex relationship between armaments processes and politics and therefore between defence industry and politics as has been described above. The strength of this relationship is very different in the individual European states and urgently needs common shaping, at least a close coordination on European level.

The defence technological and industrial base capabilities, as outlined above, do not only have an effect on the military capacity to act and the ability to further develop the military instruments, but governments, on the other hand, also exert a strong influence on defence industry developments:

Being the most important and sometimes only customer, governments define the product design by specifying the military requirements and the necessary production capacities by specifying the required quantities. That way and by the legal frame which they define in their capacity as regulating authority, they strongly influence the structure of the defence industrial base, industry capacities and survival chances of individual companies. By signing or not signing development or procurement contracts the political branch has the ability to promote or impede the development of industrial alliances.<sup>25</sup>

- ▶ In their capacity as regulating authority the governments define the size of the market on which defence industry operates by specifying the export policy framework. By defining procurement guidelines and specifications they govern the extent of a possible integration of defence industry and civil

<sup>25</sup> In this respect also the possibilities of exerting influence will decrease when the state, for example when purchasing dual-use goods, becomes only one of many customers (possibly not even an important one).

high technology industry as well as the possible technology transfer between these sectors.

- ▶ The state supports its own industry in gaining access to foreign markets. In some countries, e.g. the USA, it also participates in funding the restructuring of the industry.
- ▶ As owner or most important shareholder of defence companies the state influences business decisions also in individual cases and is thus able to directly control industrial processes.

The room for manoeuvre of security and defence policy largely depends on the defence industrial capabilities while at the same time the political branch strongly influences the scope of action of the companies. In some countries this interrelationship is being deliberately reflected on the political level (e.g. in the United Kingdom) or even strategically planned (e.g. in France) or hardly recognised (as was the case for a long time for example in Germany). The national policies regarding defence industry vary accordingly.

The demand for creating and maintaining a defence industrial base on European level has already been made a long time ago and has been repeated at regular intervals. But only since the Amsterdam Treaty (1999) and the new Article 17 of the EU Treaty, the European Union has been involved in framing this area. The Article stipulates that “the gradual agreement of a common defence policy will be supported by a defence political cooperation between the member states in a way deemed appropriate by them.”

The shaping of a defence industry policy on European level has so far proven to be extremely difficult. The reason for this is the fact that Article 223 of the EC Treaty (now, since the Amsterdam Treaty, Article 296 EC<sup>26</sup>) has in the past been the basis for the EU member

<sup>26</sup> Art. 296 EC (1) “The provisions of this Treaty shall not preclude the application of the following rules:

- (a) no Member State shall be obliged to supply information the disclosure of which it considers contrary to the essential interests of its security.
- (b) Any Member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material; such measures shall not adversely affect the conditions of competition in the com-



states for creating an own (national or multinational) legal framework for the defence area outside the scope of the regulations of the Common Market and thus for shielding their national markets. There are hardly any European regulations for this sector as nation states still insist that the Commission has no competence in this sector.

According to this national orientation, the defence sector in Europe is currently characterised by

- ▶ a fragmentation into national markets,
- ▶ redundant research and industry capacities,
- ▶ a distribution of tight funds according to “the principle of indiscriminate all-round distribution”, which is to say, there are too many R&T and defence programmes,
- ▶ relatively small production series,
- ▶ different military requirements,
- ▶ widely diverging national interests as far as politics, military and economy are concerned,
- ▶ different legal regulations (e.g. as far as defence export is concerned) and procedures.

Because up to now all big West European nations have endeavoured to create and maintain own development and production capacities in as many fields as possible that are interesting from a technology point of view or which are of relevance for defence policy, there are several (system) suppliers for all major weapon systems in Europe. Due to these structures, the duplication or multiplication of effort has become the rule. Even in the year 1998 there were six system suppliers in the field of aircraft construction, three for helicopters, more than ten for missiles and at least

seven in the field of tank construction.<sup>27</sup> Although the European procurement expenditures are only half of the US expenditures, there are two to three times as many system companies in Europe than in the USA<sup>28</sup>. Even in the field of research and development redundant structures and programmes are the rule although at least in some sectors, for example in aeronautics, in the civil area initial steps for a transnational share of work (or more precisely for a bi- and multinationally coordinated distribution of certain R&T tasks) have been initiated in the meantime. On top of this, due to the non-existing European work-sharing the single nations try to maintain own capacities in a very broad range of products. Since the decreasing investments have to be distributed to so many areas, funds are less and less sufficient to be able to compete internationally.

The fragmentation into national markets also results in the fact that defence companies dealing with comparable defence programmes in Europe only partially compete with each other, which means that the redundancy of industrial capacities does not lead to price and cost reductions. Since it remains a national responsibility to satisfy the military requirements and since the reduction of forces in the single European states lead to a decreased quantity requirement, new equipment can often only be manufactured in small series. The development cost increase at the same time but can only be allocated to less and less systems, therefore, the system cost for European defence products increase. The decrease in demand on the national markets causes a scaling-down process in industry and the development of a national monopolisation in the defence technological and industrial base (DTIB), which in turn will probably not have any cost-cutting effects.<sup>29</sup>

Without successful exports the defence industry would therefore have long been forced to reduce its capacities and to restructure. Thus, the successful export activities of some European companies have made it possible to maintain redundant industrial structures and to refrain from cross-border restructur-

mon market regarding products which are not intended for specifically military purposes.

2. The Council may, acting unanimously on a proposal from the Commission, make changes to the list, which it drew up on 15 April 1958, of the products to which the provisions of paragraph 1(b) apply.”

Especially para 1b is being interpreted differently: The member states interpret it as a rule which excludes war weapons in general from the common market, the Commission however supports a more rigid interpretation to the effect that the EU Treaty includes in principle also war weapons. The member states may however invoke this exemption in justified cases. This more rigid interpretation has also been adopted by the Court of Justice of the European Communities; refer to Martin Trybus, “The EC Treaty as an Instrument of European Defence Integration: Judicial Scrutiny of Defence and Security Exceptions,” *Common Market Law Review*, vol. 39, no. 6 (December 2002), pp. 1356–1357.

<sup>27</sup> BMVg, *Bericht zur Lage der deutschen wehrtechnischen Industrie* [FMOD, Report on the Situation of the German Defence Industry] 1998.

<sup>28</sup> US General Accounting Office, *Defense Trade. European Initiatives to Integrate the Defense Market* (GAO/NSIAD-98-6), <[www.gao.gov/archive/1998/ns98006.pdf](http://www.gao.gov/archive/1998/ns98006.pdf)>.

<sup>29</sup> Also refer to Hans Feddersen and Armindo Silva, “The Single European Market and the Defence Industry,” in: *NATO’s Sixteen Nations*, vol. 37, no. 2 (February 1992), p. 15.

ing measures (e.g. in the land systems industry and in naval ship construction). For those companies that were not as successful with their exports<sup>30</sup> and for their public customers, national production became uneconomical and the procurement of modern weapon systems more expensive. At the same time, the investment resources in the defence budgets decreased. The consequences were inevitable: Today, no European state is still able to maintain own efficient and competitive research, development and production capacities covering the necessary range of defence capabilities. *Inevitably*, industries became increasingly dependent from and among each other. The question is only whether it will be possible to control this process politically, whether this process will occur in form of predatory practices or whether this process will be primarily dictated by the market—including the associated negative consequences for maintaining the national and European defence capabilities deemed necessary from a political point of view. In any case it is to be expected that the European Industry will no longer be competitive and that crucial industrial capabilities in Europe will be lost if today's procedures of armaments production are continued.

This situation is hardly changed by the ad-hoc cooperation projects which are dominating the armaments organisation in Europe to the present day. They are primarily an instrument of national technology and industry policies and serve for maintaining or creating and expanding a maximum of national defence technology and industry related capabilities. Therefore, these projects have caused additional redundant capacities and structures, further fragmentation and smaller production series at least on system level because the final production is usually performed in all participating countries. For this “clas-

<sup>30</sup> Exports allow greater quantities and thus to distribute the relatively high development cost to a greater number of systems which in turn reduces the unit cost also for the national customer. Given the largely national focus of defence policy in Europe this results in a tough competition between European companies on the export markets. The success of these companies does not only depend on the performance of their products but also on outside factors as for example reliable political support and a corresponding policy for export promotion. Different policies for defence export are therefore competitive advantages or disadvantages for the companies. Those states who benefit from the current differences have therefore often no interest in harmonising the policies for defence export. Thus, export policy becomes a vehicle of industrial dominance in European restructuring processes.

sical” approach of European defence cooperation, i.e. bi- or multinational cooperation in individual defence programmes, the partners change from project to project and the work packages are designed in such a way that all participating nations or companies contribute to all technologically interesting components. This procedure often results preposterous interface solutions which increase the cost of such programmes considerably even if the financial contribution of the individual state to the cooperation programme is usually smaller than the development and production cost for such a product for one of the partners alone.

As an instrument of national, often conflicting foreign, defence, technology, industry and economic policies, this type of European defence cooperation is inefficient in many ways. The advantage of sharing the technological and financial risks of new programmes between several partners can be obtained this way but at the same time it is not possible to realise cost savings worth mentioning because the rigid observance of the “juste retour” principle<sup>31</sup>, aspects of supply security and the above-mentioned political interests often lead to the creation of several production lines in the participating states resulting in the fact that the theoretical cost reduction by “economies of scale”<sup>32</sup> cannot be realised in practice. In addition, the management and decision-making processes in multilateral programmes are too complex and time-consuming.<sup>33</sup>

Since the progress regarding the creation of a suitable political and legal framework on EU level has been unsatisfactory so far, a number of bi- and multilateral bodies have been established in which the partner nations deal with armaments questions.

<sup>31</sup> “Juste retour”: The principle that industrial work packages are in proportion to the funding that the respective participant has contributed. They are calculated for each cooperation programme separately. The aim is to achieve efficiency and flexibility by offsetting across several programmes.

<sup>32</sup> Simply put “Economies of scale” designate cost reductions as a result of increasing production quantities because the fixed cost can be allocated to more units which is to say that the fixed cost per unit decrease (also refer to *Gabler Wirtschaft-slexikon* [Wiesbaden 2000], p. 803).

<sup>33</sup> For the Eurofighter programme for example decisions were made in a four-stage hierarchy with approx. 50 committees by way of reaching a consensus between the participating nations; refer to UK National Audit Office, *Maximising the Benefits of Defence Equipment Co-operation. Report by the Comptroller and Auditor General*, HC 300, Session 2000–2001, March 16, 2001, p. 26, <[www.nao.org.uk/publications/nao\\_reports/00-01/0001300.pdf](http://www.nao.org.uk/publications/nao_reports/00-01/0001300.pdf)>.

- ▶ Within the scope of the Framework Agreement (FA) of July 2000 to the Letter of Intent (LoI) of 1998 six European states (Germany, France, the United Kingdom, Italy, Sweden, Spain) representing more than 90% of the European armaments capacities strive for a significant improvement of the operative conditions for a transnational defence industry. To this end they have concluded legally binding agreements in six elementary fields: Harmonisation of military requirements, security of supply, export guidelines, protection of classified data, coordination of research and development and coordination of the processing of engineering information. Nevertheless, the LoI/FA simplifies and harmonises mainly the “technical” processes in the business activities of transnational companies. At least at first glance this is not about the development of common policies. The Framework Agreement is open to all EU member states provided the founding states give their consent.
- ▶ The armaments agency OCCAR (Organisation Conjointe de Coopération en Matière d’Armement) was founded on 12 November 1996 by France, the United Kingdom, Italy and Germany as a quadri-lateral management organisation for cooperative programmes. The agency offers the theoretical opportunity of running European cooperative programmes in which at least one of the OCCAR members participates more effectively and more cost efficiently. One crucial element is the global juste retour arrangement provided by Article 5 of the OCCAR convention which would make it possible to introduce more competition and streamlined decision-making procedures while taking certain national political aspects into account. This step, i.e. abandoning the principle of programme-specific juste retour, has nevertheless not yet been successfully put into practice; one of the reasons for this is the fact that there are not enough programmes. Despite this, or rather because of this, the interest of other nations in joining OCCAR has grown significantly since OCCAR has established its own legal personality on 28 January 2001. Despite the original broad concept, so far OCCAR is primarily acting as management authority for the bi- or multinational defence programmes it has been entrusted with.
- ▶ One of the aims of the *Western European Armaments Group* (WEAG) which emerged from the Independent European Programme Group (IEPG) founded in 1976 and which has been further developed since

1992 within the scope of the WEU, had been to create a European defence market by promoting joint procurement, coordinating research and development activities and establishing a suitable legal and procedural framework. The task of the WEAG was amongst others to prepare proposals for a European Armaments Agency (EAA). However, the recommendations of the WEAG regarding this question were not pursued by the member states in 2002. Apart from this, in 1996 the *Western European Armaments Organisation* (WEAO) was founded by the WEAG member states within the framework of the WEU as a “Research Cell” with own legal personality, though limited to R&T tasks. The current activities within the framework of the WEAG are performed on a voluntary basis and the efforts to coordinate the independent national planning and decisions only produce limited results. The WEAG has tackled the right problems in the past but it neither had the means nor the structure for producing and enforcing satisfactory solutions.<sup>34</sup>

Against this backdrop it does not come as a surprise that its dissolution has been agreed upon.

Thus, we are still lacking an institution which completely coordinates and integrates the entire process of development and provision of military capabilities in Europe. The armed forces as customer with their capability requirements and the defence industry as contractor with its R&T, development and acquisition processes are at present on European level not being systematically coupled and the above-mentioned political functions of armament are not being systematically coordinated or even planned jointly.

<sup>34</sup> Refer to: Burkard Schmitt, *The European Union and Armaments—Getting a Bigger Bang for the Euro*, Chaillot Paper 63 (Paris: Institute for Security Studies of the Western European Union, 2003), p. 23.

## European Options for Action

In the medium term two options seem to be realistic for the development of the European armaments co-operation:

1. Focussing almost exclusively on national interests will be continued and the status quo simply further optimised, or
2. Some of the countries will succeed in agreeing a deepened defence cooperation and to jointly define and develop crucial elements of armaments policy.

### Optimising the Status quo

Option one is based on the assumption that the European governments are not willing to hand over more of their sovereignty in the field of armaments policy. Security, foreign, defence, defence industry and procurement policy would then largely remain under the control of national governments which means that on European level we would neither have a common or closely coordinated armed forces planning nor a suitable planning of capabilities and equipment. We would therefore continue to have redundant structures regarding the European defence technological and industrial base and the European forces.

Also for this option governments will try to coordinate their defence and requirement planning more efficiently. This could mean more room for cooperative programmes. In this case, defence cooperation would continue to take place almost exclusively within the scope of individual programmes based on the redundant industrial capacities of the nation states. The reason for this is that only few governments will be ready to give up crucial elements of their own DTIB through work sharing and specialisation also because of the lack of confidence in the reliability of the European partners. The mistrust concerns both the stability of the defence programmes and thus the utilisation and survival of the relevant DTIB capabilities and the political reliability as far as supply and services in cases of crises and conflicts is concerned. Defence cooperation would therefore remain primarily an instrument of national defence, economic, industry and technology policy. The *juste retour* principle and the striving for security of supply

would also continue to exist, two factors which allow only a limited degree of cost savings (and thus building the financial base for new additional procurements) by worksharing and “economies of scale”.

Under the political framework conditions outlined above it would not be possible to realize the option of setting free additional resources by cross-border rationalization and restructuring of the DTIB and thus to achieve a major increase in efficiency. Against the backdrop of greater international responsibilities the requirements for the forces will increase, though, which means that serious capability gaps will have to be closed by developing and procuring new equipment. Therefore, the financial pressure—and thus the requirement to use the funds more efficiently—will by no means decrease. Corresponding to this situation the governments will coordinate their requirements planning at least to such an extent that there will be more options for individual cooperative defence programmes.

The structures below the European Military Committee would be ideal for this. Working groups could develop a common threat and risk analysis and define the military tasks based on this analysis. They could also be tasked with analyses of “lessons learned” from international operations and thus contribute to harmonising and further developing new mission concepts and doctrines. Other permanent working groups in the European Defence Agency could focus on special capability fields as command and control capability, intelligence and reconnaissance, mobility, effective engagement, survivability as well as support and sustainability. It would be possible to discuss and coordinate the development of new capabilities in these groups at an early stage long before national positions, i.e. preferences for certain systems, have been developed and defined<sup>35</sup>. This expertise could be based on the experience gained in the current processes in Europe for closing individual capability gaps. If these working groups consisted of the same experts from the fields of military, armaments organi-

<sup>35</sup> Also refer to the already cited report of the UK National Audit Office *Maximising the Benefits* [refer to fn. 33], p. 29.

sation, research institutions and industry which are already tasked with requirements planning on national level, it would be possible to create many additional connections for cooperative programmes. This is particularly true if at first—as is already the case in a number of states—“functional” requirements for the new equipment are derived from the future military capabilities considered necessary. These are more flexible as detailed system requirements and would substantially increase the chance that a specific system design will be agreed on European level and that the conditions for a cooperative programme are created. If these working groups of the Agency had their own budget in order to verify own conceptual ideas for new equipment by way of R&T contracts, by simulation or even demonstrator programmes, a first step towards a joint equipment planning would be made.

### **Key Developments for the Market and the Defence Technological and Industrial Base**

In this way a close coordination of the equipment requirement and the planned periods for fielding the new equipment (two typical reasons for the frequent failure of defence cooperation in the past) would be possible which would mean more room for an increase in collaborative work. Given the assumptions made above (continued focus on national interests) this kind of cooperation would nevertheless continue to be based on redundant industrial structures because most national governments will want to have their DTIB as broad as possible. Therefore, those European countries with own defence industry will try to maintain at least national key capacities in the various sectors.

It could on the other hand be the tight resources that will be the reason for European governments to support industry in its efforts to achieve cross-border restructuring. This trend is already today being supported by the development of a common legal base for making at least the daily routine work of transnational companies easier (see the example of the LoI/FA, page 20). However, even these companies will still be seen as instruments of the respective national policy since they will continue to act against the background of national markets. Therefore the domestic customers (and in particular the parliaments) continue to demand revenues on their investments and thus a certain share of domestic development

and production. This is a significant restriction for transnational companies when it comes to using cross-border rationalisation potentials for example by means of restructuring measures or even closing of production facilities.

If at least the biggest European countries with armaments production facilities stopped applying the *juste retour* principle on each individual cooperative programme, it would be a first major step towards more efficiency in European armaments cooperation. Bearing productivity in mind, they should rather agree on a global principle of *juste retour* covering several projects and years. This would increase the flexibility for achieving more efficiency in the programme cooperation. Above all, the transnational armaments companies would be able to rationalise their own production processes because this solution would make it possible to arrange their internal work share and specialisation across borders in a more cost-effective way.

In order to be able to abandon the programme-specific principle of *juste retour* national governments must accept, though, that development and production facilities at home might be closed. The less governments intervene in the restructuring of transnational defence companies, the less they will be able to control their future dependence on foreign manufacturers. Therefore, even this relatively small step towards increasing efficiency requires confidence in the partners, that they will maintain sufficient development and production capacities on which one has made oneself dependent also for the future. A change of this kind requires a high degree of transparency in the budget and procurement planning of the cooperating states which does not exist today. Turning away from the programme-specific principle of *juste retour* and the introducing a solution covering several programmes also requires that it should be possible to launch a sufficient number of new programmes almost at the same time because the existing programmes have been negotiated down to the last detail and it is very unlikely that the existing work packages will be rearranged. Therefore, it will only be possible in the long term to achieve even such a relatively humble improvement.

If Europe really wants to strive for more competition in awarding development and procurement contracts for military equipment, the European Council would have to seriously think about how to limit the application of Article 296 of the EU

Treaty<sup>36</sup>. Taking such a step or even deleting this Article would be the most far-reaching and effective progress. Procurement would still be under national control but since the common European regulations for contract award to European defence companies would in many cases allow for competition, the result would be cost reductions for equipment.

One can assume, though, that under the current circumstances national governments will not be able to summon up the confidence necessary for a stricter limitation of Article 296 and the resulting market adjustment. The agreement of a code of conduct for a more restrictive interpretation of this Article would be the furthest-reaching conceivable solution. It could for example be agreed that Article 296 shall no longer be applied to defence contracts below a certain contract value. It will, however, probably not be possible to harmonise all factors causing competitive distortion. It is very likely that at least the promotion of armaments export—if not the armaments export policy in general—will also in the future be governed by national interests and therefore continue to be non-uniform.

### Consequences

Compared with the current situation the outlined option does not offer any significant advantages. As a minimum requirement the project-related principle of *juste retour* would have to be abandoned. This would at least make it possible to achieve a more efficient programme collaboration and to make the cross-border rationalisation of transnational companies easier. This would, in return, increase the competitive strength of at least some of the European defence companies. Since we will not see a large number of cost-intensive cooperation programmes, the possible resulting increase in efficiency will be small.

Apart from cost reductions on the demand side due to more efficient cooperation programmes the situation in Europe as far as procurement is concerned will not change much. The future European Defence Agency would be limited to coordinating the requirements more closely and thus to increase the number of possible cooperative programmes. “*Juste retour*” will remain the “basis of transaction” for these projects even if we were to successfully overcome the programme-specific equalisation of funding. The defence industry will continue to operate on

national markets and often be protected against foreign competitors. This means that the redundant structures in Europe which in the long term will be competitive only to a limited degree will continue to exist. Cross-border competition and a far-reaching rationalisation of armaments production will be the exception.

By further optimising the classical programme cooperation for example by cross-border competition on component level with the corresponding “economies of scale” the efficiency can be increased to a limited extent and thus one or the other urgently required programme can be initiated. Yet, it is uncertain whether it will be possible to maintain wide-ranging and competent national defence technological and industrial bases. These are like to decline even more and in the end the European governments will have to decide implicitly or explicitly in favour of one of the three developments for their DTIBs which are roughly outlined in the following:

- ▶ In the “System Integrator” model national armament manufacturers will maintain their capability and know-how in order to be able to perform system integration for large weapon platforms themselves. Considering the budget restraints, however, this will only be possible if the companies rely more and more on US imports and other foreign products for subsystems and components. In this model national governments and their forces would therefore depend on the supply and support of primarily American defence companies. Thus, it would not be possible to ensure a comprehensive security of supply from own means. This situation would not be compatible with the ambition to maintain an independent European Security and Defence Policy. Nevertheless, the model is quite appealing because Europe could at least *pretend* to be able to manufacture complex weapon systems autonomously. As far as platform integration is concerned, there is only little room for increasing efficiency. At least it would be possible to select the suppliers based on “single sourcing” in a world-wide competition.
- ▶ In the “Supplier” model industry would focus on the manufacture of subsystems or large components. They would lose their system capabilities to a large extent and finished weapon systems would be imported, again probably primarily from the US, so to speak in exchange for the delivery of components and subsystems. Even if this would ensure some important, though by no means all aspects of security of supply, the appeal of this solution would

<sup>36</sup> Refer to fn. 26.

however be rather limited. After all, Europe would have to accept a wide range of extremely transparent strategic dependencies— probably on the US.

- ▶ In the third model, the “second class industry” model, European states would continue their efforts to manufacture both, platforms or systems and the major part of subsystems and components. Due to the lack of funds the European technology would, however, not even come close to the US technology. In this case the security of supply would be ensured but it is questionable whether the equipment manufactured under these conditions will satisfy the military requirements in Europe or whether interoperability with the US can be guaranteed.

All three models will undermine the national and European ambitions as far as foreign, security and defence policy are concerned. There will be a tough competition for markets between the European states or rather between the European defence companies and the governments will try to turn their own system suppliers into the focal points of the evolving European centres of competence. In this way, it would be possible to pass the economic cost of rationalising the defence technological and industrial base on the European partners and they would also have to accept the dependencies in terms of defence and security policy alone. As a result the majority of the national markets in South, East and North Europe would be dominated by US companies and they will also play an important role on the Central European markets.

On the whole it can be said that maintaining the national approach in the fields of defence and armaments industry policy in Europe makes it very unlikely that an independent DTIB will be created. The cost savings achieved by the rationalisation processes in the individual nation states are not sufficient for accelerating the development and increase of European military capabilities and for maintaining powerful defence technological and industrial bases in Europe.

### **Deepening of the Armaments Cooperation in a European “Core”**

The second option assumes that some of the big armaments manufacturing states in Europe are willing to hand over certain aspects of sovereignty regarding their armed forces and their DTIBs and to subject selected areas of security, defence, armaments, armaments industry and procurement policy to a multi-

lateral or maybe even a supranational control. The European states will only be ready to do so if this does not prevent the participating governments from taking military measures in ad-hoc coalitions outside the EU. It would also be necessary to ensure that in a specific case the option to take military actions within the framework of the group would also be available if not all of the participating nations want to play a part in these actions. Consequently, the participating states would have to maintain certain national capabilities of their forces and the common capabilities would in a certain way include redundancies in order allow the “opting out” variants. Nevertheless the planning of the forces, capabilities and equipment within the “core” should be performed on a multilateral, European level.

In this core capabilities and force planning would be most closely coordinated if not altogether jointly shaped in general or in parts. The forces of the core states would also perform work sharing and specialisation to a large extent. Pooling of capabilities and focussing on different roles are additional means for creating more efficient structures. By means of task sharing and specialisation (see below) pushed by armaments manufacturers, a close-meshed network of mutual industrial dependencies would be created which should lead to a high degree of security of supply.

For the European Defence Agency this means that it would have to be flexible enough and that it would have to allow different “speeds” which is to say different degrees of intensity of cooperation in all the areas of responsibility that are assigned to it. This would allow the core states to rely on the Agency’s working groups which have already been described. These would be tasked with the development of the capability, equipment and R&T planning and the associated management. The development of strategic and operational mission concepts and doctrines would have to be very closely coordinated with NATO and aspects of R&T planning would have to be coordinated with the European Commission due to the great military relevance of “dual use” technologies.

In addition, the member states would have to establish their “own” market and agree common rules for procurement for the national procurement of military goods as well as for the procurement activities of the European Defence Agency. They would also have to agree regulations on competition for example in the areas of antitrust law and government aids as well as common rules for the transfer of goods within the

Union and the export in countries outside the EU. This could be another key task of the Agency in cooperation with the EU Commission. It would also be sensible to include the Commission in the task of monitoring compliance with the market laws and in other tasks like merger control.

In addition to this the cooperation in the armaments organisation should be extended to the conceptual shaping of a common policy for controlling developments in the defence technological and industrial base. This would make cooperations in individual programmes only a matter of the past and defence cooperation could therefore no longer be used primarily as an instrument for national policies. The development of a concerted defence and defence industry policy would then be the centre of interest. The DTIB in this European core could be based on a common market with harmonised or even common rules, thus ensuring fair conditions for all armaments manufacturers.

Depending on the size of this core market the common demand (and resulting greater quantities) as well as the fact that there would be a market on which enterprises can position themselves primarily according to business-related and economic aspects under the control of a competition authority and a powerful procurement agency, it would be possible to obtain synergy effects and “economies of scale”. This should lead to considerable gains in productivity and cost improvements. Depending on the composition, between 80 and 90% of the European defence goods would be developed and manufactured in this core. By centralising the most important defence technological and industrial bases in this core it should be possible to manufacture defence goods in Europe in a relatively efficient manner. In this way, the European defence industry would have a much better position for successfully competing on the international markets—including the markets of the EU members that do not belong to the core—with the US manufacturers. There would hardly be any negative consequences for the European states that do not belong to the core because the small defence companies of the non-members could continue to operate on their domestic markets which would still be protected and would yet have free access to the markets of the core states. The governments of those states not belonging to the core could protect their industry until it considers itself ready to join the “club”. However, the core states will hardly be willing to give possible common R&T funds to non-participating countries. Therefore, the survival

of small defence companies will still depend on the support on the domestic market and the national budgets. This should make the core market so attractive that also the other EU states will strive for membership which in the long term will lead to a common defence market covering the entire EU.

### **Key developments for the market and the DTIB**

In case of the—very likely—decision of the core states to maintain Article 296, even if restrictively applied, their own regulations would have to provide that the members will have access to all national markets and that fair competition between all enterprise in the core states is ensured. As already mentioned, the defence industries of the smaller EU states should have free access to this market. The obstacles to overcome by foreign investors in order to obtain shares in defence companies and the export monitoring between the core states would have to be abolished. For other aspects there have already been developed common rules and processes in the Framework Agreement of the LoI-6 states which would have to be amended though. Isolated national markets will disappear gradually and hence those cross-border industrial alliances will become obsolete which, like most cross-border joint ventures, had been established primarily in order to gain access to protected national markets. The national enterprises will enter a tough, intense competition on the European core market. In this way, the redundant industrial structures still characterising the European defence industry to a large extent would decrease. This is the only way in which the European enterprises, at least the ones surviving the tough fight for market shares on the European core market, will be able to stand their ground in the transatlantic competition. The result of this process (which can be compared to the phase of restructuring the US defence industry in the early nineties) will eventually be global players having no difficulties to survive on the global market. Based on common requirements on a much larger domestic market and a closely coordinated R&T policy industry will be able to obtain full-range “economies of scale” and improve their competitiveness. Furthermore, the joint requirements planning of the core states lead to a greater planning security for the defence industry because armaments programmes will be placed on a



more solid financial base by combining requirements and funds.

### Consequences

By establishing a core market the European defence industry as a whole would be significantly consolidated. Defence cost could be substantially reduced by sharing of work and specialisation, by decreasing redundant industrial structures and by obtaining synergy effects and productivity gains. The participating states would have additional resources available for additional investments. The use of R&T funds in industry and in the research facilities, which would also be specialising according to work shares, would be more focussed in selected areas. This would not only lead to a strengthening of the economical but also of the technological ability of the European DTIB to compete. Since the European forces would procure the same or at least very similar equipment from the same companies, the standardisation of equipment and interoperability of the forces in Europe would be considerably improved. In this process the European Defence Agency could assume the part of developing ideas and initiatives.

In this scenario we will see different degrees of cooperation and integration. On the whole all EU states would benefit from this “core” solution: The big states will benefit from a tightly knit defence market and they will profit from the cost savings obtained by the joint solutions. The small and medium-sized states on the other hand will benefit from the fact that their defence industries will continue to operate on protected domestic markets and have access to this European core market thus being able to improve their competitiveness in a relatively safe environment. Once the survival of these small and medium-sized companies is ensured and once they are able to compete, the respective governments can still decide to join the core.

## Conclusion

The claim of the European nations to be able to act independently in the military area and to be able to further develop their own military instruments independently requires a powerful and competitive European DTIB. A common approach for defence and defence industry policy is necessary in order to maintain and strengthen such a powerful and competitive European DTIB. The deciding factor will be whether the most important armament manufacturing states in the EU will succeed in further harmonising their requirements for the equipment of their forces and to combine this on European level with the research and technology processes in order to increase the efficiency of equipment development and procurement. An increase in efficiency by systematic standardisation of the planning processes will have to be complemented by increased transnational competition on all levels of armaments manufacture.

This will not be possible by merely optimising the existing cooperative solutions. It is very likely that it will be possible only for a core of European states to perform the necessary cross-border rationalisation and restructuring of the European DTIB to the required extent and at the required pace. The reason for this is the fact that in order to fulfil this task it is necessary that the European objectives in terms of security, defence, armaments and defence industry policy are identical or at least very closely coordinated and implemented based on a common structure. This will not be feasible in an enlarged European Union with all member states participating right from the outset. A number of like-minded states will have to lead the way.

On the national level it is necessary to develop own concepts which security, defence and defence industry policy objectives should govern the European processes and how it will be possible to achieve them.

Only strengthening the armaments sector in Europe above and beyond optimising the existing forms of cooperation will create the conditions for maintaining and further developing a European DTIB which in turn is the prerequisite for powerful, interoperable European forces and thus an independent European Security and Defence Policy. It would also provide the basis for a fairly balanced transatlantic

defence cooperation and would thus increase interoperability with the US forces. The extent to which and the way in which the new European Defence Agency will be able to contribute to the increase in efficiency will be subject of another study.

### Abbreviations

EAA	European Armaments Agency
R&T	Research and Technology
IEPG	Independent European Programme Group
LoI	Letter of Intent
MoU	Memorandum of Understanding
OCCAR	Organisation Conjointe de Coopération en Matière d'Armement
DTIB	Defence Technological and Industrial Base
WEAG	Western European Armaments Group
WEAO	Western European Armaments Organisation
WEU	Western European Union