EUROPEAN DEFENCE CAPABILITIES
No Adaptability without Co-operation

Alastair Cameron, Jean-François Morel, Oliver Foster, Bjoern Seibert, Derek Braddon, James Fanshawe; edited by Luis Simon

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About the Study

In partnership with the Czech Republic Ministry of Foreign Affairs, RUSI held a conference entitled 'European Defence Capabilities' in January 2009 in the framework of the Czech Presidency of the European Union. The event provided an opportunity for a 'stock take' of the development of European defence capabilities in support of military operations. It assessed progress made in meeting capability targets, efforts to streamline political decision-making and advances in civil-military co-ordination, as well as practical initiative-based developments surrounding NATO and the EU.

This study looks back on some of these themes and the evolution of the debate.

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The European Security Programme thus seeks to actively engage in work on European defence cooperation and also the EU's relations with neighbouring regions.

European Defence Capabilities

No Adaptability without Co-operation

Contributions by Alastair Cameron, Jean-François Morel, Oliver Foster, Bjoern Seibert, Derek Braddon and James Fanshawe

Edited by Luis Simon

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Foreword

New times call for new thinking. The intermeshing of a process of globalisation (that highlights the transnational nature of threats) with a shift in the global balance of power (which points towards the potential re-emergence of inter-state tensions) is leading to an increasingly uncertain and volatile security environment. In such an environment, armed forces will need to be able to rapidly shift their emphasis between prevention, deterrence, protection and intervention. This puts a premium upon *adaptable* defence capabilities. Both the 2008 French White Paper and the British Ministry of Defence 2010 Green Paper highlight this very fact.

No European country possesses sufficient financial, industrial or technological resources necessary to effectively sustain these kinds of adaptable military tool-kits. The current financial crisis further accentuates this fact. Mounting pressures over defence budgets and an increasingly complex and uncertain security environment call for renewed efforts in European defence co-operation. European armed forces must develop adaptable doctrines and capabilities which allow them to perform a wide variety of tasks – from high-intensity combat to constabulary duties and state-building. The current security environment demands Europeans step up their co-operation in the field of defence capability development to achieve adaptability.

This edited volume examines various aspects of European co-operation in the realm of defence capability development – political, operational, financial, industrial, etc. It builds on the findings of the 'European Defence Capabilities' conference, co-hosted by the Czech Republic's Ministry of Foreign Affairs and RUSI in Prague on 22 and 23 January 2009 in the framework of the rotating Czech Presidency of the European Union. The conference was attended by numerous officials from the EU, NATO and their member states, as well as industry and academia.

In the first chapter, Rear-Admiral Jean-François Morel and Alastair Cameron look at defence capability development in the framework of the EU, paying particular attention to the evolution of the Headline Goal process. They highlight the role of the European Defence Agency in the development of a European Defence Technological and Industrial Base and point at the potential of permanent structured co-operation for increasing Europe's defence capabilities.

Chapter two revisits the main points raised at the Prague conference in January 2009. Oliver Foster highlights the need for greater co-ordination between EU and NATO capability development mechanisms; discusses the challenges that a changing security environment presents for European capability development; and examines former European multinational capability programmes.

In chapter three, Bjoern Seibert illustrates the gap between European operational requirements and capabilities. Current shortfalls in European military capabilities negatively impact operational success and the security of European armed forces. Identifying an 'absolute' (lack of a given capability) and a 'relative' (unavailability of a given capability) dimension to capability shortfalls, he argues for revitalised procurement initiatives and procedural reform in the financing of European military operations as the best way to address existing capability shortfalls.

In chapter four, Professor Derek Braddon shows the existing intra-European disparities in defence spending, both in terms of procurement and operations. At a time of severe budgetary restraint, Europeans must acknowledge the trade-off between well-equipped and well-trained military forces and the maintenance of a powerful national defence industry. The way to leading-edge military capabilities and technologies lies, he contends, in European and transatlantic capability pooling.

In the last chapter, Commodore James Fanshawe assesses efforts to create a competitive European procurement market. He highlights the crucial role that industry-government relations play in the realm of defence procurement and points to the British experience as a good example of how a strategic partnership between government and industry results in efficient capability procurement, particularly in the key area of through-life service.

The EU and Defence Capabilities: Charting the Course

Jean-François Morel and Alastair Cameron

Military capabilities have been at the heart of the EU's Common Security and Defence Policy from the very early days. Throughout the 1990s, the Balkan conflicts illustrated the shortcomings of European military capabilities, still very much subject to Cold War standards.

A capability development process, the so-called 2003 Headline Goal, was launched within the EU framework at the December 1999 Helsinki European Council. By 2003 Europeans should be capable of deploying 60,000 soldiers in less than sixty days for at least one year.

Far from advocating the creation of a 'European army', the 2003 Headline Goal called for a reserve force that, with the consent of member states, the EU could draw from should the European Council decide to launch a military operation. To be sure, there is neither a permanent EU military force nor any principle ensuring automatic engagement of the member states. Member states bear the last word on the decision to launch an EU military operation, and their contributions will be voluntary and decided on a case by case basis.

Two capability development processes therefore started to coexist: the NATO process – with the Defence Capability Initiative, launched in 1999 and succeeded in 2002 by the Prague Capability Commitment – and the newborn EU Headline Goal process. Despite the creation of the 'EU-NATO Capability Group' as a mechanism to exchange information between the two organisations, little to no co-operation occurs between the EU and NATO in the realm of capability development.

The EU for its part strives to translate the political objective of the 'Helsinki Headline Goal' into a Requirements Catalogue (precise set of objectives and planning elements),[1] a Force Catalogue (assets identified by member states for use within the EU framework), and a Progress Catalogue (identifying the shortfalls to be remedied).

In order to tackle thirty-eight identified shortfalls, of which twenty-one are deemed 'important', the European Capability Action Plan (ECAP) has constituted twenty specialised project groups tasked with delivering appropriate proposals. Although momentum has been created, this has yet to succeed in solving important capability shortfalls (i.e. strategic airlift, tactical airlift, communications) due both to the inevitable delay in restructuring national armed forces and renewing equipment, and differing national choices in terms of defence budget allocations.

From Quantitative to Qualitative

While the first 'Helsinki Headline Goal 2003' was inspired by the lessons learned from the Balkan conflicts, the European Security Strategy then highlighted the new threats and set the European Union's strategic objectives. It is not only about defining quantitative measures of military power, but about pushing the States into operating much better together.

The new 'Headline Goal 2010' was adopted in 2004 and emphasised the need for European military forces to be more interoperable, more deployable and more sustainable thanks to better integrated logistics. The basis for this new step consisted in the following military scenarios, which were agreed upon by the member states:
- Separation of parties by force
- Stabilisation, reconstruction and military advice to third countries
- Conflict prevention
- Evacuation operations
- Humanitarian assistance.

On that basis, the European Union Military Staff and the European Defence Agency (EDA) identify the military capabilities necessary to the EU, identify member states' contributions and deduce by subtraction the capability shortfalls which should be remedied in order to match European ambitions with available capabilities.

However, in order to follow this guideline, there is a need to overcome the purely intergovernmental process that has thus far reached some limitations: it is no longer sustainable to develop military capabilities without developing more armament co-operation. In July 2004, a major effort to bridge this gap was made with the creation of the EDA in order to stimulate the effectiveness of defence R&T and to strengthen the European defence technological and industrial base.

Four main tasks are assigned to the Agency:
- To develop European defence capabilities in crisis management
- To promote and improve European armament co-operation
- To contribute to strengthen the European Defence Technological and Industrial Base (DTIB) and to create a competitive European Defence Equipment Market
- To improve the efficiency of European Defence Research and Technology (R&T).

On the whole, the EDA has managed to gain recognition in the area of capability shortfall analysis and has elaborated strategies in relation to the European Defence Technological and Industrial Base, armament co-operation and defence R&T. It was also very useful in elaborating the code of conduct on offsets and on defence procurement.

The Capability Development Plan provides the reference framework of the EDA's activities. It consists of four main strands:
- Short term analysis of capability shortfalls and operational risks that may result from them
- Long term identification of potential future challenges and related risks on the basis of the EU Long Term Vision 2025
- Potential co-operation: collation of current plans and programmes led by member states and identification of co-operation opportunities
- Lessons learned from operations: validation of capability priorities by experience gained from current EU-led operations, various national operations or other conflicts.

The Capability Development Plan is less an action plan than a cooperation mechanism to build more coherence into the various existing efforts. It provides a methodology that is an incentive for capability development, whose main principles are both the autonomy of EU decision making and the contribution of member states on a voluntary basis. The Plan may influence national thinking on defence planning, at near and long term, ideally helping to direct research and industry.

In the longer time frame (twenty years), the Capability Development Plan should help identify possible 'convergence objectives' by reaching milestones in the short term that might later provide useful guidelines for member states' own future national planning.

Having the necessary means to conduct operations requires a European defence industry, strong and competitive enough not to be dependent only on technology sourced outside Europe. It is both a powerful driver for those states whose defence industry is able to develop strategic technology and is exposed to international competition, and a stake for the interoperability of others.

In its role as coordinator of a European Defence Technological and Industrial Base, the EDA offers an opportunity to bridge the different organisations that have dealt with multinational capability development in Europe. Six states – grouped within the framework of a Letter of Intent (LoI) with the view to facilitate cross-border co-operation – represent about 80 per cent of European industrial capacity and 98 per cent of European defence Research and Development (R&D). The Organisation Conjointe de Coopération en matière d'Armement (OCCAR) was set up in 1996 and regroups six states, including five LoI countries, in view of conducting armament programmes (Aircraft A400M, Multirole Frigates, and TIGER Helicopter, for example). Others – Finland, Luxemburg, the Netherlands, Poland, Sweden and Turkey – are also participating in certain programmes without being a member of OCCAR.

With merely six nations out of twenty-eight representing on their own such a significant

proportion of the European defence market, there is only little commercial or political incentive for their investment decisions to be coordinated within a larger group. In November 2008, the EU therefore adopted a political declaration in view of putting in place a Co-operation Arrangement between OCCAR, a multilateral entity, and the EDA, which is an EU agency.

Beyond the EDA, the Lisbon Treaty includes new provisions in the area of capability development, most notably the creation of 'Permanent Structured Co-operation'. This type of co-operation establishes a sort of differentiation between member states, creating a 'driver group' in view of realising, with the appropriate means, the objectives defined by the twenty-seven, in terms of military capabilities.

In all feasibility, setting up Permanent Structured Co-operation should include three aspects: voluntary commitments made by the participating states, a number of criteria to check against the realisation of these objectives and a steering system to manage that co-operation. As the Lisbon Treaty enters into force, the idea will be to find the appropriate degree of opening for this 'driver group' to be sufficiently large to avoid appearing just as a group of larger nations – a development which a number of states are not prepared to accept – but sufficiently demanding to provide the European Security and Defence Policy (ESDP) with an effective tool.

This sort of inducement seems to be already working as a number of member states have informally expressed their wish to participate in Permanent Structured Co-operation, although its provisions have not yet been defined. On the flipside, several other member states who are members of the EDA are content with simply being a member without playing any driving role: there is in fact no real incentive mechanism at the Agency.

Taking an Intergovernmental or Community Approach?

For those states that have defence industrial interests, armament co-operation in Europe has become one of the main motivations behind their support for European Defence. But how do the community and intergovernmental approaches compare?

The question is of a genuinely political nature, as it has significant impact on the conditions for competition between national defence companies in the realm of governmental support or control of foreign investments.

To date, most co-operation in the field of armaments has been conducted within multinational frameworks, with strict budgets under the close control of their participating states (WEAG, OCCAR, and LoI, for example[2]). Within the European Union, an exemption regime relating to military equipment allows member states to avoid complying with normal Community rules.[3] The EDA also works on an intergovernmental basis, as does the whole of the ESDP, with a comparatively small budget.

However, the European Commission has progressively succeeded in expanding its own expertise to the armaments field in a number of areas: export control of dual-use goods, orientations for security research, regulations for intra-community transfers of defence material, and building up security and defence public markets. This represents a significant development of the Commission's role within ESDP as the adoption of a directive by the Commission has to be integrated in each members states' national law.

The entry into force of the Lisbon Treaty may help evolve the articulation between community and intergovernmental aspects, as Baroness Catherine Ashton, the High Representative for Foreign Affairs and Security Policy has authority both as the EDA Executive Director, but also as vice president of the European Commission. Some suggest that such a provision would help facilitate relations between both European entities.

The passage above is an extract taken from the illustrated volume by Jean-François Morel and Alastair Cameron entitled European Defence: Breaking New Ground*, published by l'Harmattan in October 2009. Mr Morel is a Rear Admiral in the French Navy and Mr Cameron is Head of the European Security Programme at RUSI.*

NOTES

1   As early as the Capability Commitment Conference, held in Brussels on 20 November 2000, member states committed themselves to provide 100,000 soldiers, 400 aircrafts and 100 ships to match these requirements.

2   WEAG: Western European Union Armament Group; OCCAR: Organisation conjointe de coopération en matière d'armement ; LoI: Letter of Intent.

3   Article 296 of the Treaty on European Communities grants the member states the right to exclude from the community field, under specific conditions, 'the production of, or trade in arms, munitions and war material'.

Capabilities: The Key to Delivering EU-NATO Co-ordination

Edited by Oliver Foster

This contribution echoes the main findings of the January 2009 Prague European Defence Capability conference, jointly organised by the Czech EU Presidency and the Royal United Services Institute. The current strategic environment, the mounting financial pressure over defence budgets, and lessons learned from past and ongoing multinational operations emphasise the need for European and transatlantic interoperability and, consequently, greater co-operation in the capability and defence procurement realms. In this sense, numerous references were made to the need for EU-NATO capability co-operation, the potential implications of a rapidly changing strategic environment over capability planning, and the lessons learned from some of the main multinational procurement programmes. The conference's conclusions in regard to these three issues are discussed below.

Towards a Strengthened EU-NATO Capability Dialogue

The relationship between the EU and NATO has been much maligned in the past. For several years it has been characterised by a level of disagreement and mistrust that has hampered effective co-operation both at the operational level and in the realm of capability generation. The source of this tension has been political, and the mistrust has been particularly notable at the highest levels of the EU and NATO machinery. However, recent developments, including the consolidation of European Security and Defence Policy, Washington's support for a more autonomous Europe in the security realm and France's re-integration within NATO's military structure, have led to a more constructive environment which offers the potential for greater EU-NATO co-ordination. Meanwhile, ongoing political tensions such as the Turkish-Cypriot dispute continue to hamper EU-NATO co-operation.

While the political autonomy of both the EU and NATO must be respected, greater capability co-ordination between the two is paramount to European and transatlantic interoperability, as well as for avoiding unnecessary duplication of structures, concepts and, ultimately, costs.

Greater EU-NATO co-operation at the doctrinal level is another important aspect of the effort towards greater European and transatlantic interoperability. A great deal of effort among the EU and NATO staffs has gone into understanding how the respective organisations operate. They have also set about exchanging information and developing a common strategic culture, with this process beginning to be successful in the operational arena. Indeed, in the Gulf of Aden, a procedural framework has allowed for excellent staff-to-staff communication, with the result that EU and NATO forces are able to operate effectively together in the fight against piracy. As both the EU and NATO become involved in operations outside their traditional zones of

responsibility and member states attempt to cope with an increasingly volatile and unpredictable threat environment, there is a patent need to harmonise training procedures and develop joint simulation exercises.

There is much room for EU-NATO co-operation at the operational level. As both the EU and NATO continue to expand their operational reach across the globe, the benefits of information sharing and joint lesson-learning becomes evident. Beyond learning, there is a strong rationale for greater co-ordination between the two organisations at the level of planning, particularly in those cases where they are both likely to be involved in the same theatre of operations.

A crucial aspect of EU-NATO interoperability is the question of capability co-operation. The need for greater EU-NATO co-operation becomes even more manifest in a financial climate that continues to present significant challenges to all member states. As resources become more and more limited, the need for pooling and other schemes for multinational capability development are more urgent. In this regard, the EU-NATO capability group offers important economies of scale for allies and partners, as does the prospect of greater interaction between the European Defence Agency (EDA) and the various bodies and agencies responsible for capability generation in the Alliance. The upgrade of the 'HIP' helicopters employed in Afghanistan, a Franco-British initiative introduced in the EU-NATO capability group, is very much welcome. References were made to the potential for EU-NATO co-operation in the field of strategic airlift, namely allowing the EU to share in NATO's C-17 initiative as its own A400M programme falls further behind schedule.

Finally, and most crucially, there is a need for the EU and NATO to co-ordinate their strategic outlooks; the whole infrastructure of EU-NATO relations depends on this very point. In this regard, the forthcoming NATO Strategic Concept should be tied into the evolving European Security Strategy to make sure that the fundamentals of EU-NATO relations are on a firm basis.

Adapting European Defence Capabilities to Meet Future Challenges

While a complex business indeed, the prediction and monitoring of the security environment is central to capability development. More so in today's increasingly uncertain context. Whilst international terrorism and other transnational threats are expected to live on, these so-called 'new threats' are beginning to make room for 'old challenges', namely inter-state tensions. As the world's centre of gravity shifts towards Asia and nations become more vulnerable to 'strategic breakup', the possibility for inter-state tensions grows. There is growing awareness over the interdependence between 'new threats' and 'old challenges', including the dangers posed by climate change, demographic change and resource competition (notably over energy or water). Inter-state rivalry is most likely to intensify over the coming years.

Changing geopolitical trends will have an important impact upon capability planning. As the world's strategic balance changes, concepts such as pre-positioned forces and forward presence become progressively more relevant. The evolution of the geopolitical context and its implications for capability development are perhaps illustrated most eloquently by France's 2008 White Paper, which establishes a forward operating site in the United Arab Emirates and is an example of French will to improve their ability to react to developments in their 'axis of geostrategic priority' – stretching across the Mediterranean, through the Red Sea onto the Indian Ocean and the Persian Gulf.

There is no need for European armed forces to embark on a wholesale adaption of their military means, not least as their mixed structure already allows a certain degree of flexibility to cope with both 'new' and old contingencies. What is needed is greater adaptability. As threats become more diversified it becomes increasingly important that the military are prepared to conduct many different types of operations during their time in theatre.

In order to produce the kind of adaptable defence capabilities that the modern day security environment demands, Europeans will need to

concentrate on increasing interoperability. Future intervention by the various European armed forces are likely to take place as part of a European, transatlantic or multinational force, along so-called 'force packages' which seek to combine the capabilities of various force elements into one deployable entity that has the ability to operate for prolonged periods of time. Joint exercises for example, are becoming an ever more common occurrence and plans are under development that will see joint training and educational facilities set up, allowing for a greater degree of commonality to be established between the different nations.

Multinational Capability Development Programmes
For both EU and NATO countries, multinational programmes are seen as vital for defence capability development. If anything, the current financial landscape, the expected reductions in defence budgets over the coming years and the ongoing exponential rise in the costs of defence technology further highlight the value of multinational co-operation in the realm of capability generation.

Past experience in transatlantic and European multinational capability development progress shows a poor record. Lessons should therefore be learnt from the more positive experiences.

Arguably, the best example of multinational capability development is offered by NATO's Early Warning and Control (NAEW&C) programme. The NAEW&C programme arose from the identified need to develop a capability to detect low-flying aircraft at long range. The high costs associated with the necessary technology led to the constitution of a 'coalition of the willing'. Through the NAEW&C programme, the American-developed Airborne Warning and Control (AWAC) technology would be integrated into nationally acquired E-3 type aircraft, which in turn would be offered to the NAEW&C force. To manage the programme's development the NATO AEW&C Programme Management Organisation and the NATO AEW&C Programme Management Agency were set up. These two bodies ensured that the necessary financial

and organisational processes were put in place. The NAEW&C programme has been remarkably successful: at present, NATO's AWACS force can lean on up to twenty-four aircraft from various countries plus additional resources provided by France, which maintained continual co-ordination with NATO forces to ensure interoperability (even prior to its full NATO reintegration). The creation of specialised agencies with management prerogatives was central to ensuring the efficient implementation of the programme.

However, the kind of success achieved by NATO's AEW&C programme has not been replicated in either the NATO or EU frameworks. The main reason for this is that participating countries tend to expect a return for their national defence industries comparable to their investment in multinational programmes. In order to avoid problems associated with national considerations about *juste retour*, potential partner countries need to be made aware of the possibility of returns prior to their involvement with a multinational defence procurement initiative.

Furthermore, to ensure that future capability projects succeed, the EU and NATO should share their experiences in the realm of capability development and multinational defence procurement. Staff exchanges, information sharing and the establishment of proven working practices shall increase efficiency. The EU-NATO capability group and EDA-NATO co-operation present promising opportunities. At the EU level, greater co-operation with OCCAR should give the EDA a way into the crucial realm of managing multinational defence procurement programs. Finally, it is crucial to establish mechanisms to encourage countries to participate in multinational defence procurement programmes. In this regard, the possibility of tying a member state's participation in Permanent Structured Co-operation to its engagement in the activities of the EDA presents an important opportunity.

The Quest for European Military Capabilities

Bjoern Seibert

The end of the Cold War dramatically changed the key task of European armed forces. From defending the inner-German border, their focus shifted to regional crises outside central Europe. Largely geared toward static warfare, European armed forces thus had to refocus toward projecting and sustaining forces in distant theatres.

The shift to expeditionary warfare required different capabilities. Both NATO and the EU thus sought, early on, to identify capability shortfalls and conducted comprehensive audits of existing military capabilities. Various capability initiatives were then launched to address the identified shortfalls and to facilitate the delivery of required military capabilities.[1]

Despite these initiatives however, European military capabilities for expeditionary operations remain unsatisfactory. And while there is general agreement on the need to enhance capabilities, the nature of the shortfalls and remedies remain contested.

As measuring military capabilities in the abstract has often proven difficult and inconclusive, this article will attempt to assess the nature of capability shortfalls and possible remedies through the lens of military operations. It asks how capability shortfalls affect operations of European armed forces, and what these experiences can tell us first about the nature of existing shortfalls, and second about the best remedies.

In order to do this, the article will first discuss in a case study how capability shortfalls affected a particular operation - the EU-led operation in Chad and Central African Republic (EUFOR Chad/CAR). Based on this case study it goes on to discuss what operations can tell us about the nature of shortfalls. Finally it will provide some possible solutions to overcome these shortcomings.

Case Study
Since 1995, European countries participated in twenty-two military operations with more than 500 troops.[2] Discussing this operational record comprehensively is beyond the scope of this article. Rather, the following case study will provide an in-depth look into the effects of capability shortfalls on the EU's largest and most challenging operation in Africa: Operation EUFOR Chad/CAR. The reason for this selection is twofold: First, EU-led operations tend to be less studied than NATO-led operations. Second, as the operation was conducted 'autonomously' (i.e. without recourse to NATO or US assets and capabilities) it provides a better overview of European military capabilities.

Before discussing the effects of capability shortfalls on operation EUFOR Chad/CAR, the next section will give a brief overview of the operation.

Background Operation EUFOR Chad/CAR
In May 2007, the French government suggested providing the military element of a multidimensional UN mission in Chad and CAR to other EU member states. After much hesitation and internal debate, the Political and Security Committee (PSC) approved the crisis management concept (CMC) in early September. In mid-October, the European Council issued a Joint Action authorising the operation, based on UN Security Council Resolution 1778. It was to be a military 'bridging operation' for a period of one year as of when initial operational capability in theatre was reached.

Once authorised however, the process of generating a sufficiently large force proved very problematic. Member states would not pledge the needed troops or equipment to launch the operation. The force generation process dragged on for three-and-half months, during which it seemed to be on the brink of breaking down at

many points. Complete breakdown was narrowly avoided in late January 2008 when France stepped in to pledge the remaining assets.

Launched in early February, the Initial Operational Capability (IOC) of EUFOR Chad/CAR was reached in mid-March 2008 (starting point of the one-year mandate). While some shortfalls were subsequently filled, others – including a shortage in helicopters – would persist through much of the operation. Notwithstanding enduring shortfalls, Full Operational Capability (FOC) was declared in September 2008, a full year after the Political and Security Committee had approved the crisis management concept and six months before the end of EUFOR's mandate. The much-needed additional helicopters were only provided in mid-December 2008, three months before the end of the mandate, by the Russians.

At FOC, EUFOR Chad/CAR numbered 3,700 troops, of which roughly 55 per cent were French. The mandate of the operation ended in mid-March 2009 and the mission was handed over to the UN operation MINUCRAT.

Effects of Capability Shortfalls
The cumbersome force generation process was only the most visible manifestation of capability shortfalls however. The spectre of capability shortfalls could also be seen at play in the planning and execution of the operation.

Effects of Capability Shortfalls on Planning
Capability shortfalls can affect operations even before they are undertaken. They can translate into self-imposed limitations in the planning phase, with ensuing consequences on the operation's effectiveness on the ground.

Before Operation EUFOR Chad/CAR was authorised, assessments of the force requirements differed substantially. This is, in principle, neither unusual nor surprising; force-to-task calculations are difficult in any operation. More telling however was the extent to which assessments differed.

EUFOR Chad/CAR was undeniably a complex operation, which explains some differences in assessments. Its key tasks were the protection of Sudanese refugees and Chadian IDPs, and the protection of NGO and UN personnel and equipment. The mission was complicated by its vastness (about half the size of France), isolation (one of the most isolated points in Africa), lack of infrastructure and harsh climate conditions. At the same time, highly mobile rebel and bandit groups, as well as rogue elements of the Chadian armed force, endangered both host population and humanitarian staff.

On the basis of several fact-finding missions, the UN Department of Peacekeeping (DPKO) presented two force options for the given complex task. Depending on the availability of rotary-wing aviation, DPKO estimated the need for a force size of either one infantry brigade (around 6,000 troops) or one infantry division (around 11,000 troops).[3] These numbers were echoed by an independent study undertaken in mid-2007 by the Massachusetts Institute of Technology (MIT), which, based on historical ratios, estimated the required force size to be between 5,000 and 12,500 troops – also depending on the availability of force multipliers such as rotary-wing aviation.[4]

The EU's initial estimates differed substantially however. The EU Military Staff (EUMS) proposed force size options ranging from one to four battalions (around 1,000 – 4,000 troops). Though the largest option was eventually retained at the political level, the actual force only comprised three battalions at its core due to insufficient pledges by EU member states.

While, as outlined earlier, force-to-task estimates often show variations, the discrepancy between the EU estimate and others was rather unusual. It is more likely in fact that EU estimates factored in available resources. Hence known capability shortfalls – such as in inter- and intra-theater lift – translated into self-imposed limitations when assessing the required force size. Such calculations played an important, perhaps too important a role, in the operation's planning

phase – though later borne out by the difficulties putting together even that modest size force.

Effects of Capability Shortfalls on Execution
Capability shortfalls do not only affect planning and force-size estimates. Their effect extends, more importantly, to the execution of an operation. In the case of EUFOR Chad/CAR this translated into reduced effectiveness on the ground and increased operational risk.

As outlined earlier, the EU's force estimate was low in comparison to others. While the political decision was made to deploy the upper end of force options presented (which was still inferior to the lowest UN estimate), it soon became clear that member states were unwilling to make the necessary pledges to deploy the comparatively low number of 4,000 troops and some of the assets requested by the Operational Commander in the Statement of Requirements.

Indeed, shortly after the approval of the Concept of Operations, the first force generation conference was held in Paris in early November 2007. Considerable shortfalls remained, however, and four additional force balancing conferences had to be convened. The second and third conferences in mid-November generated few new announcements of capability. The challenge, it became clear, was to get sufficient contributions in tactical lift – both fixed-wing and rotary-wing – as well as deployable medical facilities.

These shortfalls were not resolved by December 2007 and, to the growing embarrassment of all involved, the launch of the operation had to be pushed into 2008. The breakthrough only came in mid-January when France announced that it would provide some of the lacking air assets, as well as additional troops. Meanwhile, resigned to the obvious insufficiency of European contributions, the possibility of Russian participation in terms of critical transport helicopters was increasingly debated and eventually retained.[5]

After the additional pledges in early 2008, the operational commander came under increased political pressure to recommend the launch of the operation, notwithstanding continued shortfalls. The pressure was at least partially linked to the approaching rainy season in the area of operations, which would have critically complicated force deployment.[6] The operational commander deemed the risk resulting from the lack of requested assets – including the absence of a pre-identified strategic reserve – acceptable and eventually recommended the launch of the operation despite persisting shortfalls.

Combined with the force's modest size to begin with, the overall effect on the operation was twofold. First, the impact of the force on the ground was reduced. Second, the operational risk was increased.

While the lack of impact on the ground was exposed, the increased operational risk was, fortunately, not. First, there is little doubt that the lack of troops limited the operation's effectiveness. Indeed the security situation in eastern Chad and north-eastern CAR remained precarious, despite the presence of the EUFOR. Though the causes of continued insecurity are multiple, the limited coverage of EU forces reduced their impact on the ground and hence their effectiveness. Increased operational risk, though not exposed, was another very real consequence of lack of capabilities. It did not surface because EUFOR Chad/CAR was luckily never really tested. A combination of prudence on behalf of the commanding officers, a deeply divided rebel movement after an unsuccessful coup attempt in February, and very importantly EUFOR's benefit from the French military reputation in Chad, contributed to the success of the deterrence strategy. This however does not negate the reality of increased risk due to lack of capability.

Operations and the Nature of Shortfalls
The effects of capability shortfalls outlined above in relation to EUFOR Chad/CAR are by no means limited to that operation, or EU operations only. They can help us shed light on the nature of

capability shortfalls in a way that more traditional measures may not.

The traditional approach has been to measure available military capability in the abstract, by providing a comprehensive overview of the military capabilities of a single state or multiple states. This approach can be deceptive, however, and lead to an overestimation of the military means available for expeditionary operations.

Most operations undertaken by European countries, including Operation EUFOR Chad/CAR, are in fact relatively modestly sized. At the same time, EU members spent the equivalent of €200 billion on defence in 2008 while, with the possible exception of the United Kingdom, no other EU state was engaged in major combat operations. Moreover, most member states had been working for several years on various capability initiatives to address shortfalls. It thus hardly seems possible that only eleven utility helicopters, or less than 1 per cent of the European helicopter fleet, was all that was physically available in late 2008 to deploy for EUFOR Chad/CAR for example.[7]

This apparent discrepancy in a given practical case allows us to better understand the nature of capability shortfalls. To do so a distinction can be made between what I will call, for lack of a better term, 'Absolute' and 'Relative Shortfalls.'

Differentiating between Absolute and Relative Shortfalls
When talking about shortfalls, most analyses usually refer to what can be called 'absolute shortfalls.' In this case the needed capability is physically not available. This can be true for one of three reasons: either a capability simply does not exist in the repertoire of a member state (e.g. strategic aircraft for most EU countries) or it exists but is not suited for the operation (e.g. medical facilities that are not deployable) or, at the given point, is being used for other purposes (e.g. earmarked for another operation). Absolute shortfalls can affect even small-size crisis management operations.

Absolute shortfalls however can only account for part of the problem. 'Absolute shortfalls' in helicopters for example can only partially explain European countries' inability to put together 20 helicopters for EUFOR Chad/CAR. Indeed, other factors prevented member states from contributing the requested forces and assets. Together these factors lead to what I will call 'relative shortfalls.'

Chief among them is the nature of operations. Unlike during the Cold War, most of today's military operations – including EUFOR Chad/CAR – do not address crises that pose an existential threat to EU member states. Often they do not even pose a threat to other vital interests of the states asked to contribute to the operations. As such, they are often perceived by states as 'discretionary' operations.[8] Correspondingly, even when they do decide to participate, member states do not employ all the capability at their disposal.

Two other factors further compound the situation: competing claims for national forces and operational costs.

In 2007, an estimated total of 71,000 military personnel of European nations were deployed in a total of thirty-eight operations. This number highlights the extent of competing claims on the forces of most EU member states. For example, the force generation process for operation EUFOR Chad/CAR took place as several other operations had significant shortfalls in helicopters. EU members were confronted with requests from both the United Nations and more importantly NATO to provide urgently needed utility helicopters. Aside from the limitations on the overall number of helicopters available to each nation (i.e. absolute shortfalls), EUFOR Chad contributing members had to factor in the pressure they would come under if they contributed helicopters to EUFOR Chad while being reluctant to contribute any to the NATO mission in Afghanistan.

A second and even more powerful disincentive is related to operational funding. With few exceptions, the EU uses a system of 'costs lie

where they fall'. In other words, contributing member states largely have to finance the participation of their contingents, which accounts for the biggest share of the mission costs. A smaller part of the costs are common costs, for which member states have developed a mechanism independently from EU institutions, known as the ATHENA-mechanism.[9]

The common costs however tend to be relatively small when compared to the overall cost of an operation. In the case of EUFOR Chad/CAR, one rough estimate puts the overall costs of the operation somewhere between €800 million – €1 billion.[10] The common costs only amounted to €140 million, or roughly 14-17.5 per cent. Thus, the member states that make the largest military contributions also have to make the largest financial contributions.

Addressing Shortfalls
The distinction between absolute and relative shortfalls is not absolute; for a given asset, there can be both absolute and relative shortfalls, e.g. tactical aircraft. The distinction is however very important in considering strategies to remedy capability shortfalls. Different types of shortfalls are in fact amenable to different solutions.

In many ways, the focus of strategies to overcome shortfalls has thus far been on addressing 'absolute shortfalls'. Addressing these is however only one part of the problem. What is needed is a twofold effort.

First, in order to address absolute shortfalls, a renewed and more concentrated effort is needed to match growing political ambitions to undertake expeditionary operations. However, even if such efforts were to be undertaken, their effects would most likely only be felt over the longer-term as procurement cycles take time. To illustrate this, the example of the initiative to address absolute shortfalls in heavy utility helicopters is telling. Even if Germany, France and possibly other member states take the political decision to procure the long-debated heavy transport helicopter (HTH) immediately, the

aircraft could only be available in a decade. The same is true for many other crucial assets. This is not a reason not to undertake efforts to close such absolute capability shortfalls – quite to the contrary. The time factor should make serious and concentrated efforts even more important. In the meantime temporary or bridging solutions should be pursued if possible. An interesting example of such bridging solutions is the Franco-British Helicopter Initiative.

At the same time, there should be no illusion that if all major absolute shortfalls were addressed, the problem in force generation would be solved. Rather, relative shortfalls would, if unaddressed, continue to cause challenges in force generation. As mentioned earlier, the very nature of European armed forces operations today – i.e. 'discretionary' operations – limit the extent to which participating countries are willing to invest in them. Compounded with the certain persistence of competing operational claims, addressing relative shortfalls will require changing the financing of operations. While attempts have been made to reform the operational financing system to reduce disincentives for member states, this problem has not yet received the attention it deserves.

Solving this problem will require increasing the common costs of operations – especially for cost-intensive activities such as inter and intra-theatre lift and logistics. While the issue is politically controversial, and previous attempts have failed, changes would not require a long time to implement. Addressing the funding issue would also affect the second factor causing relative shortfalls – i.e. competing claims. Increasingly, member states will contribute assets to operations that have cost-sharing mechanisms.

In conclusion, it should be understood that capability shortfalls affect military operations undertaken by European countries. While EUFOR Chad/CAR is an example, other operations are also affected. At the same time, close analysis of the nature of shortfalls in a given operation allows one to gain a better understanding of the nature

of European armed forces' capability shortfalls, as well as the way forward. Most importantly it allows us to identify the important distinction between absolute and relative shortfalls. Both affect current operations and need to be addressed. Each however needs different strategies to remedy them. Absolute shortfalls need to be addressed through a revitalized effort in procurement initiatives. Relative shortfalls on the other hand need to be addressed by reducing the disincentives leading to shortfalls in military operations through a reform of the

current financing system of operations. Thus while the strategies are known, what is needed is a renewed political effort to implement them.

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NOTES

1   For a good overview of the various initiatives see: Hans-Christian Hagman, 'European Crisis Management and Defence: The Search for Capabilities', *IISS Adelphi Paper* (Vol. 353, 2002), pp. 15-33.

2   Significant means in this context with more than 500 troops. For more see: IISS, 'European Military Capabilities: Building Armed Forces for Modern Operations', Strategic Dossier, July 2008, p. 17.

3   See UN Security Council, 'Report of the Secretary-General on Chad and the Central African Republic', S/2007/97 (February 23, 2007), pp. 1, 4-5. Depending on the aviation capability attached to the force.

4   The study was written by the author of this chapter. See Bjoern Seibert, 'African Adventure? Assessing the European Union's Military Intervention in Chad and the Central African Republic', MIT Security Studies Program, November 2007.

5   The Russian helicopters (four Mi-8 MT) only became operational in December 2008, just three months before the operation officially ended.

6   Indeed, for the operation to be launched at all, certain infrastructure contracts had to be signed by the Operational Commander prior to the launch of the operation. At the same time, French forces arrived at the SPOB prior to the launch of the operation.

7   In Operation EUFOR Chad/CAR the following nations deployed helicopters: France eight (four Puma and four Gazelle, Ireland two (civilian contract: two Ukrainian-owned and operated Mi-8), Poland three (Mi-17) and Russia four (Mi-8).

8   See also Bastian Giegerich, 'European Military Crisis Management: Connecting Ambition and Reality', *Adelphi Paper* (Vol. 397, 2008).

9   Common cost in all cases are costs of headquarters (OHQ, FHQ and Component Headquarters), infrastructure for forces, and Medevac. In the case of EUFOR Chad/CAR common costs were extended to improvements at airports (mainly Abéché Airport), air-to-ground surveillance (one maritime patrol aircraft), satellite imagery and two role two hospitals.

10 Personal estimate based on previous study.

Operational, Structural and Procurement Expenditure in European Defence Budgets: Trends, Patterns and Reform

Derek Braddon

In recent years, military expenditure burden-sharing within NATO has again become a prominent issue for debate, with the US arguing that even after the end of the Cold War it has continued to bear an excessive and disproportionately large share of the burden (for a detailed discussion of the issue, see Hartley and Sandler, 1999).[1] From the European perspective, burden-sharing in global defence provision has become a highly emotive issue with some European NATO members (who have been criticised for not 'pulling their weight') arguing that their level of commitment and resource sacrifice are under-valued and that they are treated unfairly by the organisation.

A simple comparison of economic power and military commitment between the US and Europe highlights why the US considers that military burden-sharing is inequitably distributed. In 2008, for example, the population of the European Union exceeded that of the US by some 200 million people. Europe's GDP was about $4 trillion greater than that of the US (which also had to contend with the economic implications of a trillion dollar deficit). Europe was therefore bigger, richer and less financially exposed than the US, yet the latter contributed over 40 per cent of world military expenditure and produced about half of world defence output. Indeed, Europe spent only half that of their US ally. Since 1999, US defence expenditure has soared by 67 per cent in real terms to $607 billion in 2007, some 42 per cent of the world aggregate figure for that year and a sum greater than the next fourteen nations overall expenditure on defence.[2]

Within the European aggregate for defence expenditure, however, are hidden many different levels of commitment to military provision, and the picture is changing all the time. Part of the rationale for this has been the increased involvement of military forces from European nations in global operations since 2000. In 2001, under Article V of the Washington Treaty, the US requested the support of NATO Europe members and, consequently, European military forces were dispatched to the US, to the Mediterranean and to Afghanistan.

With the emergence of a new EU Security Strategy in 2003 which embraced anti-terrorism, weapons of mass destruction limitations, 'failed state' intervention, national emergency response, EU battle groups acting as rapid reaction forces, international security and stabilisation provision, European troops saw duty in East Timor, the Democratic Republic of Congo, Darfur, Chad, the Horn of Africa and in a range of global peace-keeping units. However, despite this evolving global role, the actual number of European troops deployed globally since 2001 has only increased from 65,000 to some 80,000 personnel.

The essence of the problem is that the kind of rapid reaction capability that NATO requires today is very limited, especially in Europe. Many of the European allies still maintain military forces equipped and trained for static territorial defence rather than for expeditionary, rapid response campaigns in war zones such as Afghanistan. In part, this is due to the fact that NATO relies predominantly upon national ownership of military forces to preserve national sovereignty. The effectiveness and global deployability of these 'national' forces, therefore, ultimately depends upon the efficiency and effectiveness of individual allies and on their willingness to commit adequate resources to the provision of effective defence. Even where mobile and flexible forces do exist in Europe, their availability is often limited by commitments to other international agencies such as the UN, the EU and, of course, national demands.

Under plans for the transformation process of NATO,[3] the development of well-equipped, rapid response forces with full expeditionary capabilities is a major priority. Such plans are, however, both long-term

and demand a significant slice of a nation's defence budget, frequently creating conflict between achieving the plans' goals and meeting day-to-day costs of troop deployment on actual missions. The transformation process began at a European Council meeting in Cologne in June, 1999 where governments resolved that: 'the European Union shall play its full role on the international stage. To that end, we intend to give the European Union the necessary means and capabilities to assume its responsibilities regarding a common European policy on security and defence […] the Union must have the capacity for autonomous action, backed up by credible military forces, the means to decide to use them, and a readiness to do so, in order to respond to international crises, without prejudice to actions by NATO.'[4]

In November 2007, the Council of the EU approved the so-called Progress Catalogue which identified both quantitative and qualitative gaps in military capability in Europe and analysed the potential implications of these gaps for the effectiveness with which the EU could conduct military operations in the context of crisis management. The main conclusion to this exercise was that, by 2010, although the EU would have the capability to conduct the full spectrum of military tasks required of it, crucially, there were a range of significant operational risks caused specifically by the gaps identified that had to be confronted by policy decision-makers. Among those gaps capability shortfalls considered most critical were the ability to transport forces to theatre and effectively deploy them; to protect them while on deployment; and to secure information superiority. To address these gaps in provision, a Capability Development Plan was submitted by the European Defence Agency (EDA) in July 2008.

Governmental support both for the Capability Plan and more generally for European defence transformation is, of necessity, budget-driven and recent global economic events have shaken the foundations of many national economies, calling into question budget commitments. In a world where the recession has completely changed the notion of 'deficit financing' at government level,

it is inevitable that sooner or later public spending will have to be severely curtailed, and defence budgets may well be perceived as an easy target for policy-makers wielding the axe.

The military acquisitions / operations budget trade-off has rarely been more acute and a significant number of European NATO members still fail to achieve the NATO target of 2 per cent of GDP for their defence budgets. Inevitably, such limitations on defence budgets must impact upon both their full participation in military operations and also upon the capability gap between themselves and those more committed allies.

So what is the commitment to defence expenditure in its various forms across Europe? Which nations across Europe are currently demonstrating their commitment to NATO and to defence provision in general? The remainder of this paper explores this issue at a number of levels from procurement budgets through research and development commitments and infrastructure provision to military personnel levels, maintenance expenditure and operational commitments and examines the ways in which different nations are contributing to Europe's defence provision.[5]

Procurement Budgets
Between 2001 and 2006, defence spending in US dollars across Europe displayed a marginal increase in real terms. Defence expenditure in the six European countries with the greatest commitment to defence provision (UK, France, Germany, Italy, Spain and Sweden – the so-called LOI (letter of intent) countries – increased from $195.3 billion in 2001 to $205.7 billion in 2006.

In contrast, the other eleven countries in the EU at that time experienced a reduction in defence spending from $38.6 billion in 2001 to some $35.9 billion in 2006. Those ten European countries which entered the EU in 2004 experienced a small increase in spending over this period from $11.2 billion in 2001 to $12.8 billion in 2006.

For the remainder of Europe who, at that time, were not members of the EDA (Romania and

Figure 1: Defence Expenditure for European nations; 2006 and 2007.
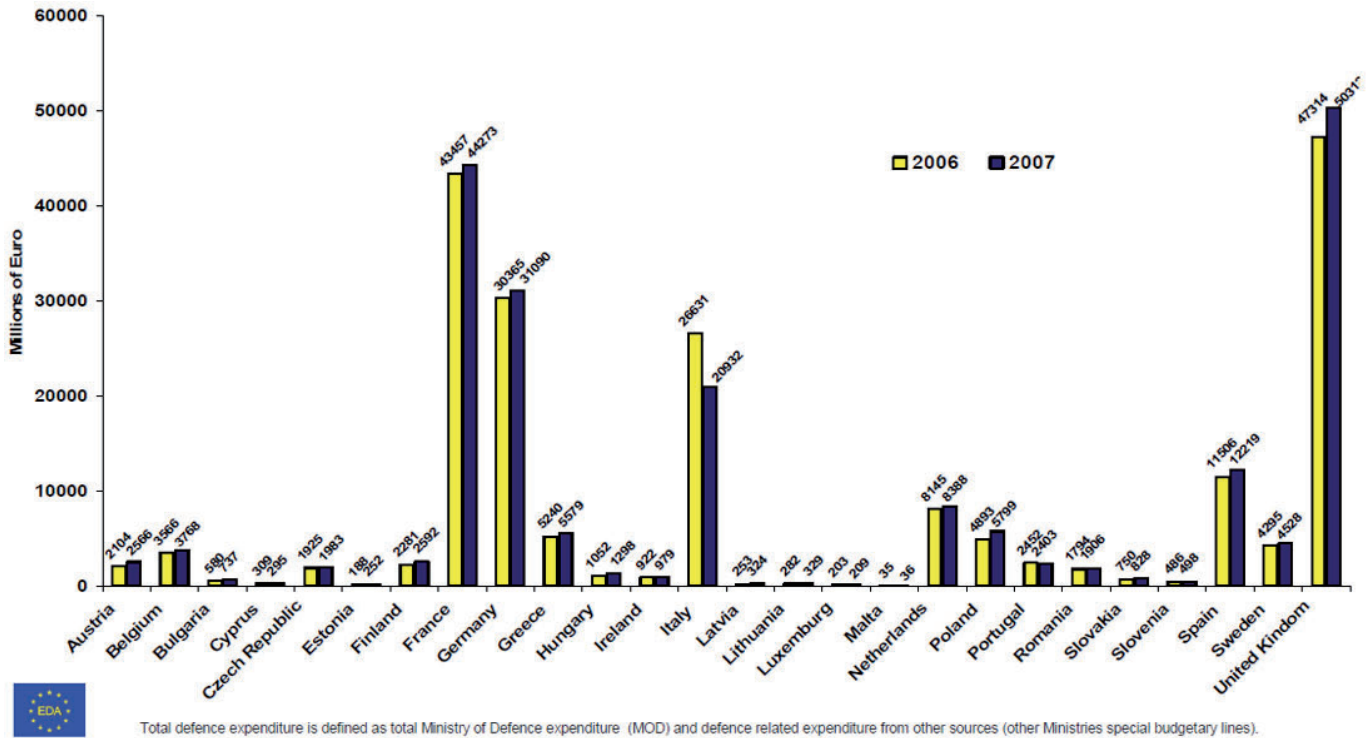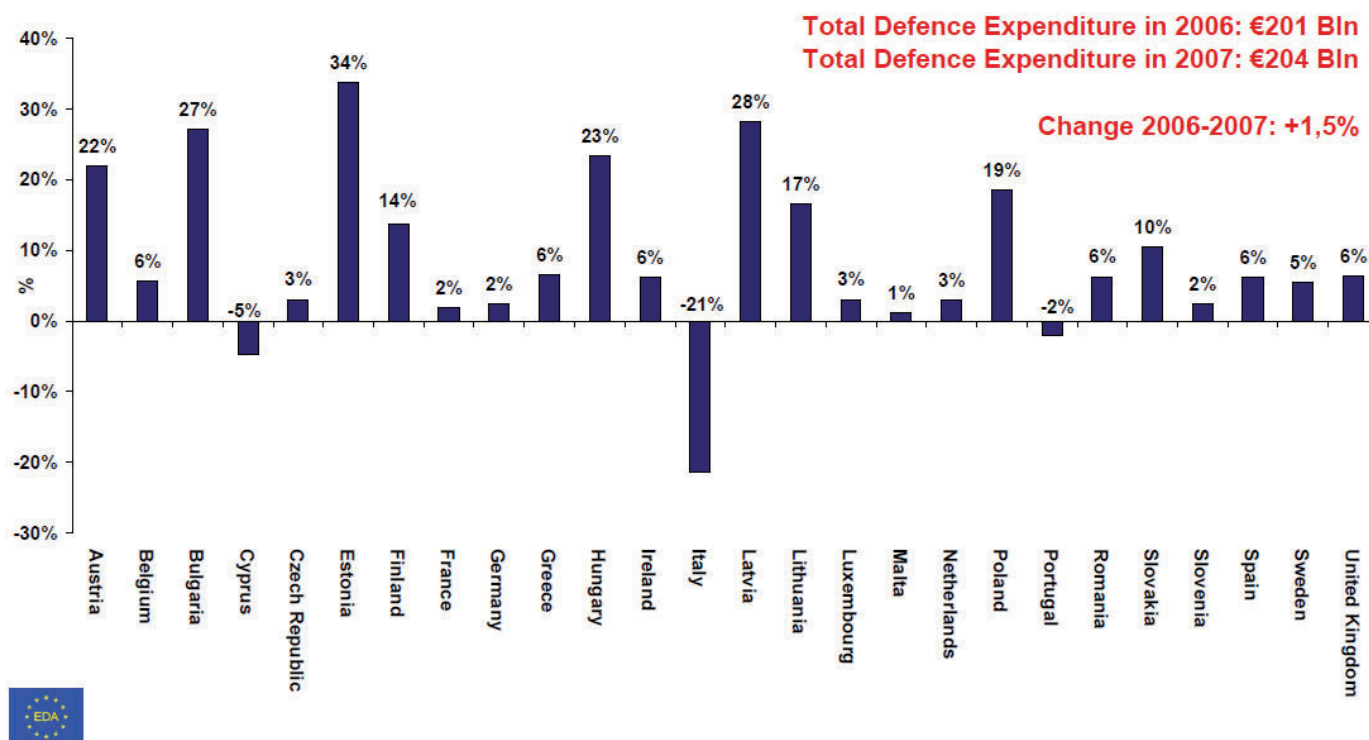

Source: EDA, 2008.

Bulgaria [who are now members], Norway, Turkey, Albania, Bosnia-Herzegovina, Croatia, Macedonia, Moldova, Switzerland, Serbia & Montenegro), spending on defence decreased by approximately 10 per cent over the period from $27.2 billion in 2001 to $24.8 billion in 2006. As a result of these expenditure adjustments, the share contributed by the LOI countries to Europe's defence spending rose from 72 per cent to 74 per cent between 2001 and 2006.

The diagram above shows defence expenditure for European countries for 2006 and 2007. The dominance of LOI countries in defence expenditure is highlighted here with the UK and France leading the rest of Europe in nominal expenditure by a wide margin. Germany and Italy are the next highest spenders, although Italy displayed a significant reduction in their commitment to defence spending in 2007. Spain and Sweden (the two other members of the LOI group), the Netherlands, Poland and Greece also exhibited significant defence budgets in both years.

Within the LOI group, the nation spending the most on defence in both years (the UK) committed over ten times the nominal expenditure of the LOI nation spending the least (Sweden). Across the rest of Europe, Austria, Belgium, the Czech Republic, Finland, Portugal and Romania also made notable contributions to the European total.

It is conventional to express defence budgets comparisons in per capita terms. When national statistics are adjusted for population size, the picture changes considerably. In 2007, for example, the UK and France remain the highest spending nations on defence with per capita defence expenditure of €827 and €698 respectively. However, the Netherlands moves into third position with per capita spending of €513; then Greece with €499 per capita; Sweden with €497; followed by Finland with €491 and, making a remarkable contribution, Luxemburg with a per capita defence spend of €439. Germany's €378 and Italy's €354 move well down the league table of per capita defence expenditure in 2007 with very modest €275 per capita defence commitment coming from Spain – only two-thirds

Figure 2: Defence Expenditure: % change in 2006-2007.

Source: EDA, 2008.

that of Cyprus's €378. Of the former Communist nations in the EDA, above average commitment in per capita terms came from Slovenia (€247); the Czech Republic (€193); Estonia (€188); Slovakia (€154) and Poland (€152).

Another measure of a country's commitment to defence expenditure, of course, is the percentage of GDP it is willing to commit to this purpose. It was noted earlier that NATO has a target of 2 per cent of GDP for defence spending. In 2007, only four European countries in the EDA managed to reach or exceed that target with the UK, France, Greece and Bulgaria (the most committed nation with 2.55 per cent) exceeding 2 per cent of their GDP.

Several countries – namely, Germany, Poland, Cyprus, Latvia, Estonia, Romania, the Czech Republic, Slovakia, the Netherlands, Portugal, Slovenia, Finland, Spain, Italy, Sweden, Hungary and Belgium achieved between 1 per cent and 2 per cent of GDP, while Austria, Malta, Luxemburg and the smallest spender, Ireland (0.53 per cent GDP) committed less than 1 per cent of their GDPs

to defence provision. Overall, EDA nations spent about 1.7 per cent of their GDPs on defence in 2007.

While the percentage GDP measure is a widely accepted international comparator for economic variables, another important indicator of the significance attached by a country to defence spending is how large a share of their aggregate government expenditure nations are willing to commit to that purpose.

In 2007, for example, only four European EDA nations were willing to commit over 5 per cent of government expenditure to defence: the UK, Slovakia, Greece and Bulgaria (making the strongest commitment at 6.74 per cent). A more modest commitment of between 2 and 5 per cent of government expenditure to defence spending in 2007 was exhibited by Estonia, France, Poland, Cyprus, Latvia, the Czech Republic, Lithuania, the Netherlands, Portugal, Finland, Germany, Italy, Hungary, Slovenia, Spain and Sweden. Once again, Austria, Malta, Luxemburg and Ireland spent less

than 2 per cent of government expenditure on defence in that year against an EDA members average commitment of 3.7 per cent.

Procurement Instability

The data noted above paints a picture of relative stability in European defence budgets. In reality, however, in specific countries expenditure levels can vary considerably year-on-year which makes comparability of commitment more difficult. Figure 2 on the previous page provides an example of this variability in defence budgets.

In Figure 2, we see the full extent of budgetary changes in defence expenditure in just one year. Against a European average increase in defence expenditure between 2006 and 2007 of 1.5 per cent, Europe's biggest defence spender, the UK, delivered a 6 per cent increase in its budget. France and Germany managed an increase of just 2 per cent each with notable reductions in defence budgets of 2 per cent in Portugal, 5 per cent in Cyprus and a dramatic 21 per cent in Italy. On the other hand, several former Communist countries out-performed the European average by

a remarkable degree with a 14 per cent increase in budget in Finland; 17 per cent in Lithuania, 19 per cent in Poland, 23 per cent in Hungary, 27 per cent in Bulgaria and 28 per cent in Latvia. While these increased commitments to defence spending probably reflect the adjustment of many of these countries to NATO membership costs, they still represent well above average performance in the latest year for which data is available.

Investment in Defence

Another important indicator of how much a nation is willing to commit to the provision of defence can be found in its willingness to invest in the military sector. (See Figure 3 below).

Capital investment always implies a sacrifice – surrendering today's consumption expenditure for tomorrow's improved economic performance – so investment expenditure in defence represents a clear desire on the part of a government for enhanced security and better military capabilities. In Figure 3, recent investment commitments to the defence sector are indicated for 2006 and 2007. Figure 3 reinforces the picture of a Europe within

Figure 3: Investment in Defence Equipment and R&D, 2006 and 2007.
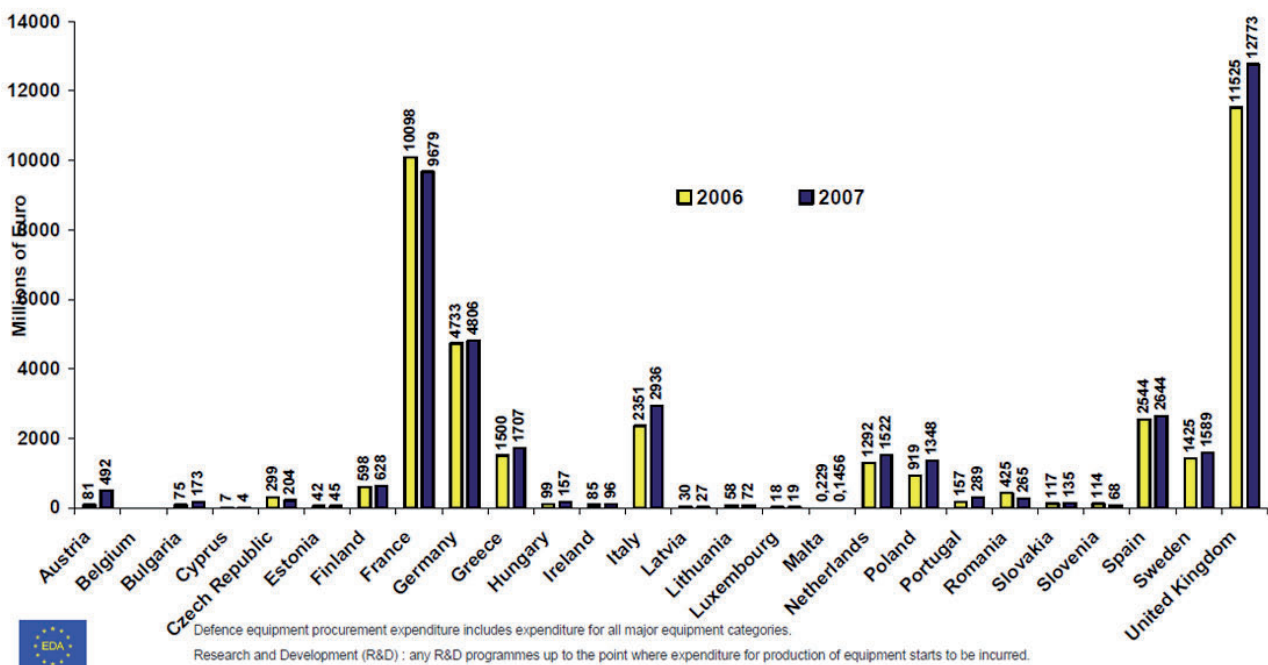
Source: EDA, 2008.

which the vast bulk of actual defence investment is carried out by very few nations.

The UK leads the list of defence investors with an average commitment in these years of about €12 billion per annum with France spending almost as much at €10 billion. Three European countries made lower but still significant average annual defence investments with Germany at €4.8 billion and Italy and Spain at €2.6 billion. Greece (€1.6 billion), Sweden (€1.5 billion) and the Netherlands (€1.4 billion) are the next most committed investors. The remainder of Europe made a relatively modest contribution to defence investment in this time period although there were small injections of capital (but significant in the context of their respective GDPs) from Poland (€1.1 billion), Finland (€0.6 billion), the Czech Republic (€0.25 billion) and Romania (€0.3 billion).
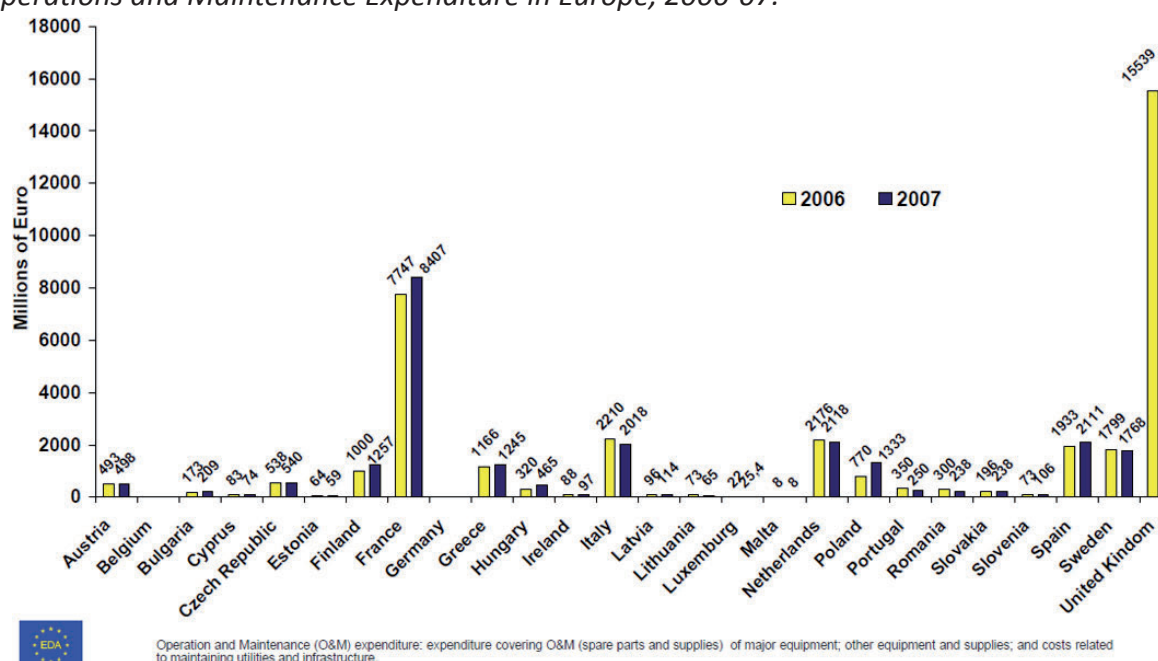
Because of issues of cost and risk, major defence projects within Europe are now often collaborative in nature (such as the Eurofighter Typhoon and Eurocopter projects) with partners sharing investment and output. In general, such projects are conducted principally by the major defence spending nations of Europe. The UK, France,

Germany, Italy and Spain made up 99 per cent of all collaborative defence investment in Europe in 2006-07 with additional minor contributions from Finland, Lithuania, Portugal and Luxemburg.

Static data for one or two years, however, does not present an entirely accurate picture of defence investment commitment over time. If we consider post-9/11 defence investment within Europe up to 2007, some interesting trends emerge. Over the period, the UK, France, Italy and Sweden gradually reduced the share of defence investment in their overall defence spending (Sweden at 45 per cent remains most heavily committed). Germany's share remained stable while Spain's has risen sharply from 12 per cent to 21 per cent.

Only nine countries in Europe (France, Finland, Norway, Romania, Spain, Sweden, Switzerland, Turkey and the UK) managed to maintain defence investment levels as a share of total defence expenditure at more than 20 per cent over the period. In Belgium, Italy and Portugal spending on defence investment fell below 10 per cent of the overall defence budget. However, it is important to note that among the new EU members, Latvia, Lithuania and Poland have all experienced

Figure 4: Operations and Maintenance Expenditure in Europe, 2006-07.

Source: EDA, 2008.

significant investment share growth in the defence sector over the period.

However, if we relate defence investment to the size of a country's military forces, some interesting performances are observed. Indeed, some of the new (ex-communist) European Union members have achieved a remarkable average growth rate in terms of investment per soldier: Slovakia (33 per cent growth); Lithuania and Estonia (28 per cent); Poland (23 per cent) and Latvia (12 per cent). In part, this growth is due to increasing investment but, in some cases, it may also be attributable to declining force personnel numbers.

Operations and Maintenance Expenditures

Another significant part of the defence budgets of European nations covers operations and maintenance expenditures, which include the acquisition and storage of spare parts and equipment for major projects, parts and equipment supplies for other projects, and the cost of maintaining military utilities and infrastructure.
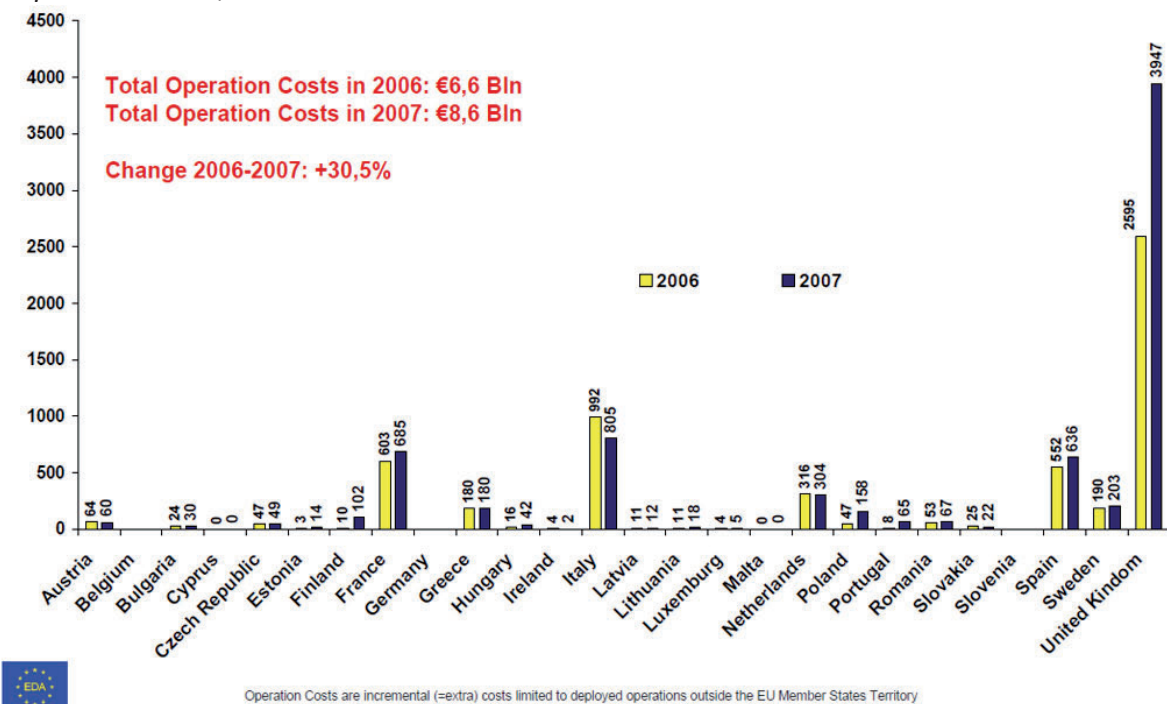
In Figure 4, European budgets for defence operations and maintenance are displayed for 2006-07 and equally reveal vastly different levels of commitment. The UK (approximately, €16 billion) is revealed as the greatest spender here in nominal terms with France also displaying strong commitment but delivering only about one half of the UK commitment. Four other European nations make a more modest but nonetheless significant contribution to operations and maintenance expenditure: Italy, the Netherlands, Spain and Sweden (each about €2 billion). More minor contributions come from Greece, Finland and Poland (about €1 billion) and also from the Czech Republic and Austria (about €0.5 billion annually).

If we now examine operation costs (i.e. the costs of maintaining military operations outside EU member states territories), the picture becomes even starker (see Figure 5).

In Figure 5, the burden carried by the UK in operation costs is very clear. Just under €4 billion were committed by the UK to operations beyond the borders of the EU. In essence, this is a key part of the cost of the country's prominent role in NATO, the UN and the rest of the international community. Italy comes a distant second to the

Figure 5: Operation Costs, 2006-07.

Source: EDA, 2008.

UK in this area of the defence budgets, spending less than €1 billion on average, annually. France and Spain each commit about €0.6 billion to operation costs.

Figure 6 illustrates European defence commitment in terms of military personnel. Seven countries in Europe dominate in armed forces provision: France, the largest, with over 350,000 military personnel in 2007 leads the field, followed by Germany (c. 245,000); Italy (c.185,000 in 2007, down from 307,000 in 2006); the UK (c. 183,000); Poland (c. 143,000); Greece (c. 135,000); and Spain (c. 132,000). Some other nations also maintained significant numbers of military personnel in 2007 – some 75,000 in Romania; 46,000 in the Netherlands; 40,000 in both Portugal and Bulgaria; 36,000 in Belgium; 33,000 in Austria and some 32,000 in Finland.

A large standing army or other military force can clearly represent a nation's significant commitment to defence expenditure, but does little in itself to resolve issues of flexibility within European troop deployment. At present, Europe simply does not have sufficient properly armed and trained military personnel, capable of being deployed globally as situations demand. This critical point is well illustrated in Figure 7 which captures European capability in troop deployment for 2006 and for 2007.

The picture painted by Figure 7 is striking indeed. In this most critical of military capabilities – the capacity to move military forces of the highest calibre to locations where they are urgently required for combat or for humanitarian duties – only three European countries are able to make a serious contribution. The UK leads the field here with an average troop deployment in excess of 18,000. France, with 17,000 troops deployed in 2006 was second within Europe, although this contribution declined sharply to just some 11,000 in 2007. Similarly, Italy deployed some 11,000 troops in 2006 but only about 8,500 in 2007. Other significant deployments were made by Spain and the Netherlands (about 3,000 each) and by Romania and Poland (between 2,000 and 3,000 each). Minor contributions to European troop deployment came from Hungary, Greece, the Czech Republic, Sweden, Austria and Finland in the 2006-7 period.
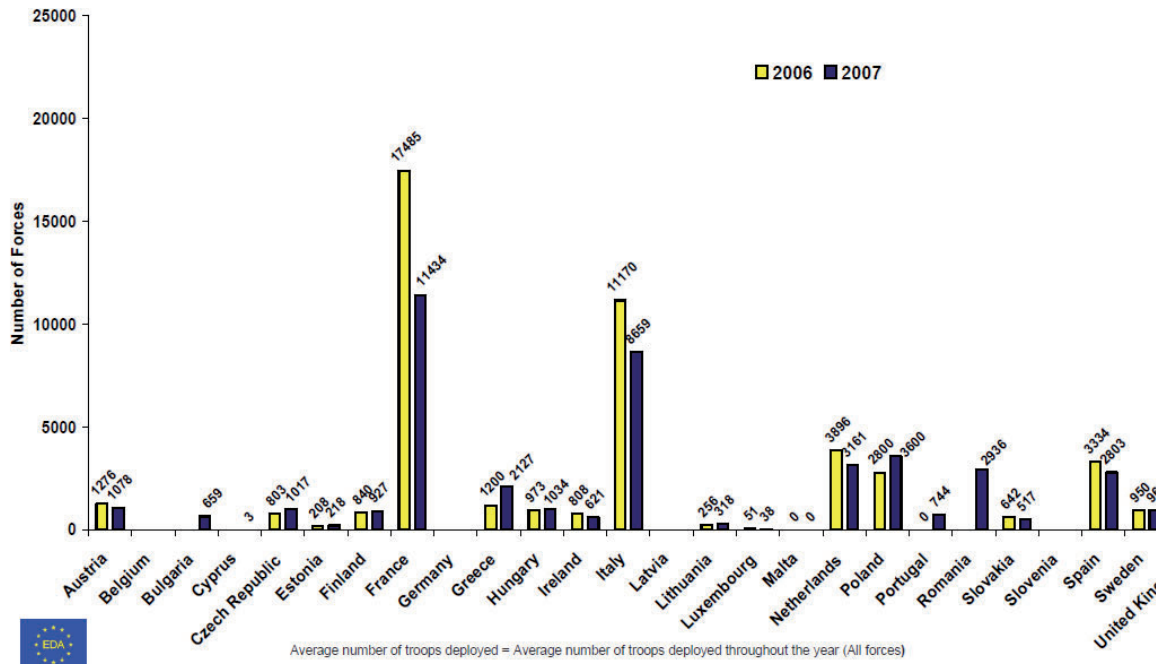
Finally, economic resources are also devoted to military infrastructure construction and

Figure 6: Military Personnel
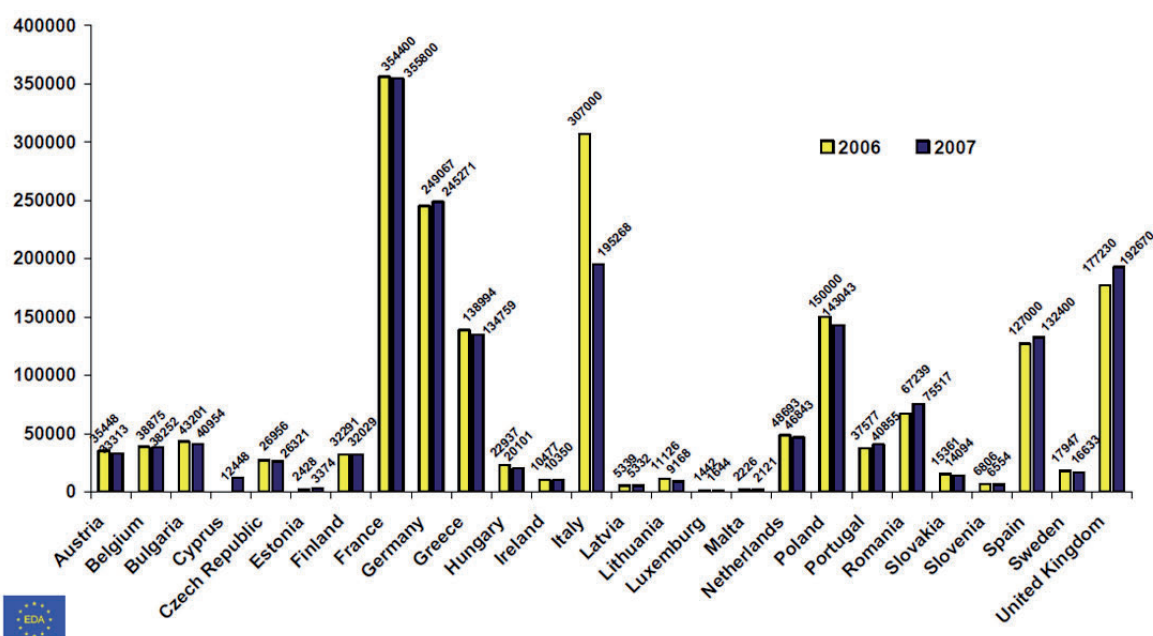
Source: EDA, 2008.

Figure 7: Troop Deployment; 2006 and 2007.

Source: EDA, 2008.

development by individual nations within Europe and here again the picture repeats itself. In 2007, for example, military infrastructure expenditure was committed mainly by just three European nations: France (€1.8 billion); Germany (€1.3 billion) and the UK (€1.2 billion). Much smaller but still significant expenditure on military infrastructure was carried out by Italy (c. €200 million); Spain, Poland, the Netherlands and the Czech Republic while the remainder of Europe committed minimal resources to this purpose in 2007.

Conclusions

Europe spends almost €180 billion per year on defence and governments are clearly aware of the 'continuing gap between ambition and our actual collective military capabilities' as the former Chief Executive of the EDA, Nick Witney, highlighted in 2005. This 'continuing gap' is not, however, necessarily attributable to serious under-funding of defence but may be more a consequence of inefficiencies in the way Europe plans, co-ordinates and delivers defence provision. Furthermore, while a few nations within Europe do still dominate in both military expenditure and troop deployment, noted above are many examples of where smaller, poorer European nations are making a commitment

to defence provision that exceeds what might be realistically expected of them.

What is clear is that there is an urgent need for Europe as an entity to pursue much greater economies of scale and scope in the provision of defence than has previously been the case. Military capabilities need to be rapidly developed not as the fruit of 'national champions' but as genuine trans-European ventures. In almost every European manufacturing industry, product design and development is pursued in the main through technology partnerships and/or 'rainbow teaming' between the leading players. Cost and risk is simply too great today for a single company (or country) to bear – the risk of failure and the vast amount of finance required now to convert innovative thinking into new products (particularly in the defence sector) is, in most cases, prohibitive at the national level. Companies pool their resources – scientists, engineers, research teams – to create innovation in product design and development and have to live with and manage the intellectual property rights risks that accompany such joint action. Such trans-national corporate linkages are now very prominent in automobiles, pharmaceuticals, electronics and suchlike, and they now exist – although to a much

Figure 8: Infrastructure Expenditure; 2007-08.
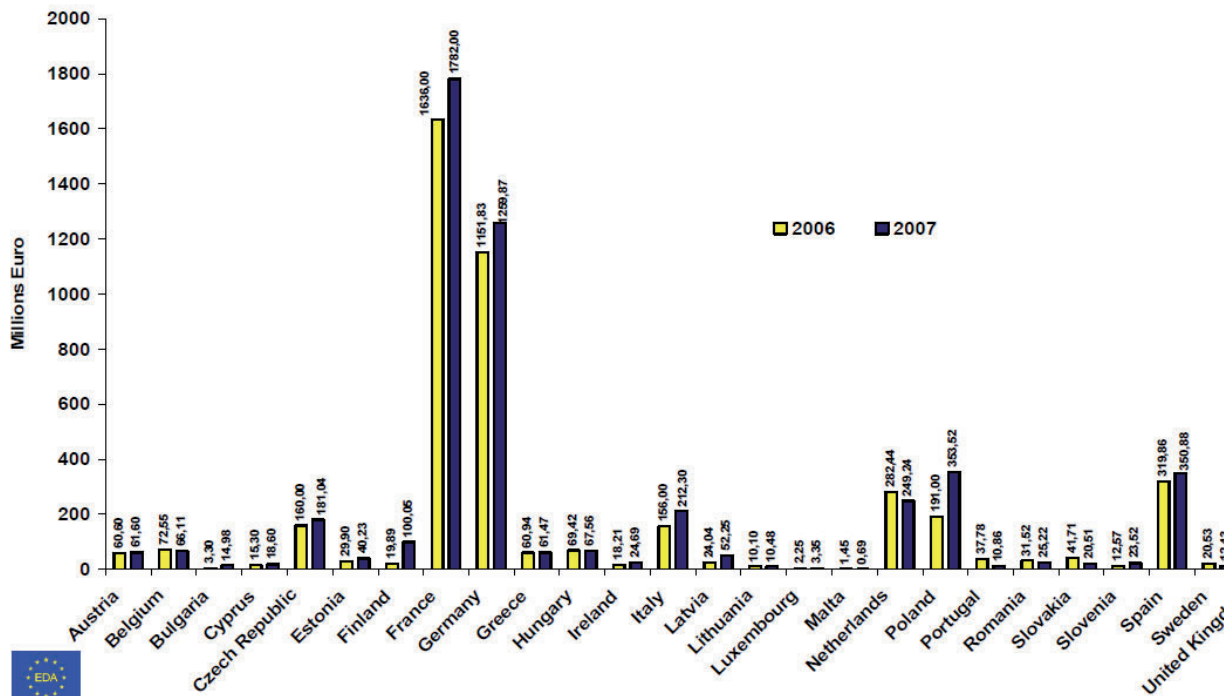
Source: EDA, 2008.

lesser extent – in defence (for example, Eurocopter; Typhoon; A400M).

We have already witnessed some success with this approach in European defence capability development as, for example, with progress in software defined radio capability through joint development work involving six European countries: Finland, France, Italy, Spain, Sweden and Poland. However, in the past, where European nations have combined to jointly design, develop and produce a major defence project (such as Eurofighter Typhoon) cost over-runs and production delays have often been a threat to the project's survival. This 'cost-delay' problem is currently undermining the production and delivery of another major trans-European aerospace initiative: the A400M military transport aircraft. This £18.5 billion aircraft project, already three years late in terms of entry into service (now expected in 2012), is also experiencing serious cost over-runs. In May 2009 the UK government, committed to purchasing twenty-five A400M aircraft, issued a warning to the manufacturer, EADS that further cost increases would not be tolerated and that alternatives were being explored (including leasing or procuring additional C17

and/or C130J capacity from the US). Remarkably, these concerns remain almost a year later, with little progress having been reached between the manufacturer and customer nations.

For Europe to offer an efficient, full spectrum military capability in the future requires that such problems as the A400M are overcome quickly and with minimal disruption to product development and production. Beyond getting the economics of military procurement right, however, lie three additional issues that also need to be addressed urgently, especially if the trans-Atlantic burden-sharing issue is to be resolved:

- First, how can European nations 'trade off' the costs of current military operations against the development of future capability when both are required simultaneously?

- Secondly, how can the EU best provide incentives to its members to adopt the 2 per cent of GDP commitment to defence budgets as proposed by NATO? Meeting this target right across Europe would ease the pressures underpinning the burden-sharing debate and could, if allocated optimally,

at least partially overcome the growing 'capability gap' between the allies.

- Europe also needs to extract more from the existing allocation of defence resources by taking the joint procurement of military weapons further, through an efficient European agency. This will overcome the diseconomies associated with a 'fragmented' Europe where each nation, more or less, does its own thing. Better coordination of government requirements across Europe is required to avoid unnecessary duplication in production, eliminate unhelpful internal competition and avoid serious and often life-threatening incompatibilities in military provision (i.e. problems with 'friendly force' identification systems as experienced by some Allied troops in Afghanistan.

In essence, we need to co-operate more than we have ever done before, within Europe and across the Atlantic, to create forces that are capable of dealing with the new security challenges. Europe needs to recognise that, at a time of severe budget restraint, there will inevitably be for many nations a direct and unavoidable trade-off between maintaining a well-equipped and trained military force and financing and maintaining a powerful national defence industry. The two may not be possible together and a choice will have to be made. To resolve these problems, much stronger collaboration, within Europe and also across the Atlantic, is essential.

In the end, if we genuinely believe in the concept of a trans-national military alliance, it is essential that we develop as rapidly as possible a communal pool of US-European joint military capabilities, leading-edge technologies and well-equipped and trained military forces in the most efficient manner possible. It requires NATO members, wherever located, to put aside the notion of financial burden-sharing and, instead, to seek a more optimal outcome in terms of assembling Alliance-based forces and equipment which combine the specific strengths of individual members, allowing them to focus their efforts to the best effect, within an over-arching military intervention strategy to which all members subscribe and contribute in their own particular way.

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NOTES

1 Hartley K. and T. Sandler, 1999, NATO burden sharing: past and future, *Journal of Peace Research,* Vol 36, no. 6, pp. 665-80.

2 Stockholm International Peace Research Institute, 2008.

3 See, for example, Burwell F.G. et al, 'Transatlantic Transformation: Building a Nato-EU Security Architecture, The Atlantic Council, Policy Paper, March 2006.

4 European Council Declaration; Cologne, 3-4 June, 1999.

5 All tables and related data employed in this paper and sourced as EDA, 2008 are derived from 'Defence Data of EDA participating Member States in 2007: Building Capabilities for a Secure Europe'; European Defence Agency, 2008. N.B. All EU member states except Denmark participate in the EDA.

Effective Partnering between Governments and Industry

James Fanshawe CBE

Striking the balance between providing operational commanders with the capabilities they require at the present time and ensuring the armed forces are prepared to meet future challenges is never easy. All too often political decision makers, military leaders and defence industries become caught up with the pressures of current operations. One result of this is that they can all lose focus on potential future crises that will require new capabilities in order to deal with them. The difficulties of achieving such a balance have however, recently been compounded by the effects of the global economic downturn which will inevitably mean that resources available for such programmes are being dramatically reduced.

Against this backdrop the need for Europe to work together is paramount. It is now seen that unity of effort is one of the best ways to develop and acquire new and expensive technologies which can only be achieved through close and effective collaboration.

For the EU, and within it the European Defence Agency (EDA), a number of policy documents and guidelines to improve the partnering between EU governments and the European defence industries have been established. At the forefront of these initiatives is the 'capability development plan' (CDP). However, as former High Representative Javier Solana said previously: 'it is quite clear… that the CDP is not a supra-national military equipment or capability plan which aims to replace national defence plans and programmes. It should support, not replace, national decision-making.'

So how can European nations ensure that they are individually and collectively best placed to offer the optimum operational capability needed by operational commanders, while meeting their own individual aspirations and budgets? And how can the plethora of defence-related companies in Europe, large and small, ensure that they work as closely as possible to get the most out of ever dwindling resources to meet these requirements?

These are very taxing questions when set against the pressing demands of current operations. They are even more difficult to answer when looking into the sort of capabilities which may be required in the future.

One of the key problems is that the demand for military capability across Europe is not particularly well structured. For example, work to produce a capability database revealed that more than one nation was working on similar projects and that there were significant gaps in other areas.

It is encouraging that the EDA steering board approved a series of roadmaps in the autumn of 2007 covering a broad range of activities aimed at implementing the European defence technological and industrial base strategy. But it is a truism that this work will only produce fruit if governments and industry are working together hand in glove. Indeed, history has provided many examples of programmes that have started well but, for a number of reasons, failed to produce anything of worth. Many would even argue that some of these projects have tended to increase costs and reduce capability.

However, this is not always the case. Programmes such as the harnessing of helicopter availability, the on-going collaborative work to improve network enabled capability and third party commercial support for logistics demonstrate are strong examples of success.

A further point of concern is that less than 2 per cent of Europe's total defence expenditure was invested in Research and Technology. In addition, approximately only 10 per cent of that R&T expenditure was spent through European collaborations. In comparison the US is outspending Europe by five to one in defence R&T.

It is clear therefore that achieving a balance is essential and the EDA's direction to link research and capabilities more closely to ESDP priorities and

resources and efforts into more structured demands is a very positive step in the right direction.

Furthermore, the EDA's efforts are complemented by the EU code of conduct on defence procurement as this code lays down some very logical principles. Unfortunately the code is entirely voluntary and therefore likely to be one of the first victims of ever tighter defence resource programmes.

For industry too, there are some brighter lights on the horizon, notably with the stated desire to maximise opportunities for all suppliers across Europe. Indeed there has never been a better time for ensuring a greater degree of mutual support within industry. To facilitate this there has to be even closer co-operation between EU governments, and discussions within the European parliament relating to defence contract procedures are another encouraging step forward.

Nevertheless a number of concerns remain prevalent, particularly over any voluntary opt in/out scheme. If organisations are trying to find reasons not to contribute, they have been handed the perfect excuse to opt out. Therefore if progress is to be made within both the participating and subscribing states, the traditional barriers must be set aside or removed altogether.

A number of tools already exist that should help this process. The EDA electronic bulletin board – the EBB - for defence contracts is one such example that is already proving its worth. Indeed it is encouraging to see the UK requirement for the provision of a managed service for a secure information system was posted alongside a demand on the part of the Norwegian armed forces for twenty commercial looking light patrol vehicles.

There are also the joint investment programmes, from which two examples shine through. Firstly, the three-year programme on force protection, involving twenty European governments, and secondly, the Innovative Concepts and Emerging Technologies (ICET) initiative, with contributions from eleven European countries.

Finally the 'captech' concept seems to be an ideal platform for drawing together companies from similar technology areas with experts from across the full spectrum of defence, research and academic organisations. If the twelve 'captechs' achieve their aim of matching research and technology to agreed defence capability needs, a major step will have been taken towards effective European defence co-operation.

This unfortunately, may be more difficult to achieve than might be hoped, as the many differing approaches adopted by the European states can tend to derail any joint aspirations. Despite this, realistic progress can, and must be made in the trio of capability domains but with the proviso that measurable progress will only be possible if the good ideas generated do not just disappear into the vortex of talking shops.

If these fail to emerge in such a format that truly engages and informs both those who are charged with making procurement decisions across the nations, and those who can provide the commercial capability to realise their requirements, failure is a serious threat to operational capability. It should be borne in mind that this can be equally true for both current and future operations.

Furthermore, as the economic market adjusts to the realities of the upheaval of the last two years, there are difficulties at both ends of the commercial scale. Money is bound to be removed from current and planned equipment programmes – the effects of this are already being seen and this constriction will certainly impact across defence industry, notably on the prime contractors. For example, there are already instances where existing orders are likely to be reduced in terms of the number of platforms eventually ordered. Unfortunately these reductions may have a knock-on effect on certain suppliers who may become more vulnerable if their output is less required than before, or if the time taken to agree sales becomes unnecessarily stretched out. Such delays will of course have a disastrous impact on commercial profit and loss accounts. Ironically, it seems that there may be an increasing demand for the niche outputs of some of these companies,

particularly for current operations in the Middle East, and smaller, nimble suppliers are likely beneficiaries. Defence procurement agencies and the Prime contractors must therefore be prepared to seek out the capabilities of these companies so as to ensure that their outputs continue to plug the needs of the major procurement programmes.

In order to ensure this process continues smoothly, the EU steering board and EDA needs to do everything in their power to ensure that information does move freely and effectively round the participating member states and their industrial bases.

In return, companies must not expect information to just flop through their inboxes. Indeed some would argue that the collapse of some defence companies, as with other commercial sectors, can be seen to be the result of their failure to adapt to shrinking defence requirements, reduced resource bases and the efforts of their competitors.

At the same time, nations are quite understandably keen to underpin their own domestic defence industries, particularly in the current tough marketplace. In this situation however, it is vital that every opportunity is taken to ensure that individual organisations pull together to ensure that our field forces are deployed and sustained in the best way possible. Effective communication and co-operation are also essential elements to real progress, even at the expense of traditional reserves.

Urgent Operational Requirements (UORs) are often seen as the best and simplest way to get suitable equipment to front line forces in order for them to maintain their ability to do the job to the best of their ability and, importantly, in the shortest time possible. However, this can often result in the by-passing of the traditional procurement routes. In many ways this is the right way to do business. For example, the UK has spent over £3 billion on equipment UORs for Iraq and Afghanistan since 2001, and those who have served in these theatres would argue that they could not have done the job without the fruits of UOR acquisitions.

It is however essential that a balance is struck between expenditure on UORs and capital projects for the future. In particular, over-dependence on procurement by UOR can lead to unnecessary gaps in equipment programmes, largely due to a lack of general oversight within nations. There has also been a tendency to acquire what is actually available when the UOR is approved. This is welcomed by defence industries tired with laborious competitive tendering processes, but it can be rather short-term.

For example, UORs can result in a failure to ensure that enough equipment is bought to service the training pipeline, and that adequate emphasis is placed on achieving that training before troops deploy. UORs also tend to reduce the scope for co-operation across member states by cutting down procurement cycle processes and timelines.

Europe's forces have been engaged in current operations for a long time and the style of operations being undertaken is bound to dominate the current modus operandi. However, it is important not to forget the lessons of history which show that military operations, of either an unexpected or unwelcome nature, may well lie not far round the corner.

As a result it is essential that Europe's armed forces be as prepared as possible to meet whatever operational challenges may arise in the future. Furthermore, whilst current national defence expenditures are known, it is far more difficult to anticipate how much EU nations will be able to spend in the future. It is also still difficult to define the impact of any changes in US foreign policy and defence priorities under President Obama, and the impact they may have on the European side of the Atlantic.

In this period of uncertainty, therefore, it is essential that valuable resources are not wasted by sticking to over-complicated procurement processes for capital projects. Indeed effective co-operation and collaboration will be one of the keys to success as there are great opportunities for partnerships between military and commercial organisations

and development of some of the innovative lend/ lease schemes which are now in place.

But there must be scope for more, and it is essential that full provision is made for through life capability management arrangements. They make absolute commercial sense and ensure that there is effective burden sharing with guarantees on all sides.

In sum, there are always going to be difficulties getting governments and industry within Europe to work together, even to maintain and improve our overall European operational capability. To make matters worse, these will be further exacerbated as we all work through a taxing period of global financial re-alignment. Despite this, the demands on our forces are not reducing at the same rate as the stock market down-turns. In fact, they are either staying level or increasing. Being adequately

prepared to meet commitments now and in the future will demand a level of partnering between governments and industry which has not yet been achieved.

Whether Europe is ready to meet this challenge is always going to be a subject of debate. There are strengths and weaknesses but it is essential that all states pull together to ensure whatever progress can be made in improving defence capabilities is realised. Sadly, continued global political, financial and social turbulence guarantees that there is no room for failure.

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