

European Defence Industrial and Armaments Co-operation

Research Paper 97/15

4 February 1997



The 1990s has proved a difficult decade for the UK's and Europe's defence industries with contraction and loss of employment. Despite this, the UK enjoys a large balance of trade surplus in defence goods and the British defence sector remains one of the few areas of the nationally-owned economy with a significant presence in the global manufacturing market.

The changing nature of defence procurement and programmes is such that decisions increasingly reach beyond national borders. Both the problems faced by British defence companies and their EU counterparts, and the potential solutions are similarly international in character. This paper briefly addresses some of these difficulties and discusses some of the potential countermeasures which are being or might be adopted by European governments. It does not explore the moral arguments surrounding the manufacture or export of defence goods, nor does it examine MOD procurement practices.

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I The Context

Over the past decade the European defence industrial sector has been influenced by three broad trends. Firstly, since the end of the Cold War world defence spending, with the exception of the regions of East and South East Asia and the Middle East, has fallen. The UK defence budget dropped by 25 per cent in real terms between 1984-85 and 1994-95.¹ Similar reductions have been undertaken by other European states, although now some stability is returning to European defence spending with the rate of decline slowing.

Secondly, given the fall in spending, the volume of the global conventional arms trade declined considerably between 1987 and 1990. The rate of decline slowed between 1991 and 1995 and the Stockholm International Peace Research Institute (SIPRI) has detected a slight upward drift in exports thereafter.² At the same time, the defrosting of international relations has made the global arms market hugely more competitive. Prior to 1990, the flow of defence goods faced numerous political restrictions. Soviet defence industries had a closed market amongst Communist satellites. Beyond its immediate allies in Europe and the Far East, the USA was often unwilling to licence its most advanced weaponry for export for reasons of security. This left much of the Third World market open to European manufacturers from the UK, France and Germany. France, in particular, excelled in monopolizing the markets of its former colonies. With the exception of a small number of pariah states such as Libya, Iraq and North Korea, most of the rigidities in the post-Second World War arms market have now been removed. What has transpired is a veritable 'feeding frenzy' in which the traditional arms exporters, unfettered by political limitations, fight in savage competition with newcomers in a gradually declining market. US defence industries, actively backed by the Pentagon, now sell throughout the world. Russian and Chinese exporters offer cut-price products. Formerly isolated states, such as Israel and South Africa, which developed indigenous defence industries in order to be self-sufficient, can now bid for most foreign contracts. A further factor is that the new defence industries in the Far East are expanding rapidly. Although European manufacturers continue to have success in selling arms in Asia, agreements often include provisions for local assembly and other technology transfer which will result in new competitors emerging in defence sectors which were previously the domain of Western and former Soviet states.

In spite of these trends, between 1991 and 1995, according to SIPRI, the market remained dominated by six large producers which in order of magnitude of sales were the USA, USSR/Russia, Germany, Britain, France and China.³ Government figures show that the UK increased its share of world defence export *orders* from 14 per cent in 1994 to 20 per cent

¹ Defence Committee and Trade and Industry Committee First Report, *Aspects of Defence Procurement and Industrial Policy*, HC 61/62, Sess. 95/96, Para 2

² *SIPRI Yearbook 1996*, p.463

³ *op. cit.* p 465

in 1995.⁴ Provisional government statistics for 1996 indicate that the British share rose to 25 per cent last year with the UK retaining its second place in the world market after the USA.⁵ However, in real terms, UK defence export deliveries broadly declined in the period 1990 to 1994.⁶ Total EU arms exports have been worth roughly half of those of the USA in recent years.⁷

The third and final trend is the continuing tendency for defence inflation to run ahead of average inflation, particularly as defence equipment becomes increasingly complex. When even the USA has trouble affording B-2 bombers which cost some \$500m a piece, military absurdity may rapidly be being reached.⁸ It has now become impossible for any country, with the exception of the USA and to a limited extent Russia, to develop, manufacture and acquire unilaterally a full range of high technology weaponry.

II Political and Industrial Reactions

Falling defence procurement has contributed to a decline in defence employment. Between 1984 and 1992 alone, the EU Fifteen lost 600,000 defence jobs.⁹ In the USA, employment in the military aircraft, missiles and space sectors alone fell from 627,000 to 326,000 between 1990 and 1995.¹⁰ In 1985-86, when MOD spending reached its second post-war peak, total UK employment dependent directly and indirectly on defence expenditure and exports was estimated to be 625,000. This had fallen to 360,000 by 1994-95.¹¹ National reactions to the global decline in defence orders have been mixed but have involved increasing consolidation of manufacturers within states, new cross-border mergers and additional joint ventures.¹²

A. Consolidation

The US industrial reaction to the fall in American procurement expenditure, actively encouraged by the Clinton administration, was to pursue a policy of divestment and consolidation. This rationalization process has proceeded more rapidly than in Europe. Even

⁴ HC Deb 14/1/97 c.119 Figures for 1996 are not yet available.

⁵ MOD PR 31/1/97

⁶ 1995 figures not yet available *Defence Statistics 1996*, Fig. 1.11

⁷ *SIPRI Yearbook 1996*, p 468 and p.470

⁸ *Jane's All the World's Aircraft 1996-97*, p.688 Cost of Batch 2 aircraft. The Batch 1 aircraft cost in excess of \$800m a piece.

⁹ *The Independent*, 26/1/96

¹⁰ *SIPRI Yearbook 1996*, p.421

¹¹ MOD UK *Defence Statistics 1996*, Fig. 1.10 and HC Deb 14/1/97 c.121

¹² For a statistical analysis of the UK defence industry see Hartley and Hooper, *Study of the Value of the Defence Industry to the UK Economy*, Centre for Defence Economics, University of York, December 1995

before it was completed, the disparity in numbers between US and European manufacturers was noticeable. Last autumn there were 10 European tank and armoured vehicle manufacturers, 10 helicopter producers, 11 missile companies and 14 warship yards. In each category, the USA fielded five companies or less.¹³

The mega-mergers commenced with the Martin-Marietta acquisition of the General Electric defence electronics business. Lockheed merged with Martin Marietta in 1995; Northrop and Grumman were combined in the same year; Lockheed Martin then merged with Loral in 1996; General Dynamics cast off divisions to Hughes and McDonnell Douglas and then bought Bath Iron Works, a warship builder.¹⁴ In January 1997, General Motors sold its defence arm, Hughes Electronics, to Raytheon.¹⁵ These mergers have been surpassed by the amalgamation, announced in December 1996, of Boeing, the most successful US civil aircraft manufacturer, with McDonnell Douglas, traditionally the leading US military aircraft producer. If approved by federal regulators, the new combined company will have projected sales of some \$48bn.¹⁶ The company, simply titled Boeing, will be one of the three new giants of the US defence industry alongside Lockheed Martin and Raytheon Hughes, the latter two with predicted 1997 sales of some \$30bn and \$14bn, respectively.¹⁷ By contrast, the sales of British Aerospace for the year ending 1995, and GEC for the year ending 1996, were both around \$9bn. The sales for the year ending 1995 for the two other large European aerospace companies, the then Daimler-Benz Aerospace and Aerospatiale, were both in the order of \$10bn.¹⁸

Since 1993 the Pentagon has supported this consolidation process by the controversial practice of reimbursing military contractors for some of the costs of mergers and rationalizations. Reimbursement has occurred in defence industrial sectors deemed significant to national military capability and also where the companies concerned can demonstrate that the US government will achieve savings in procurement costs.¹⁹ Lockheed Martin alone has apparently requested \$1.7bn in reimbursement payments for its consolidation actions. Critics of the policy have remarked that the policy does not achieve the financial benefits stated, that these are really 'payoffs for layoffs' and that it amounts to a tremendous subsidy of already profitable defence companies.²⁰ Direct reimbursement for merger costs is not general policy in Europe although in many European countries subsidies are paid to defence companies either directly, as in the case of GIAT, the French tanks and gun manufacturer, or indirectly by the provision of contracts with generous profit margins.²¹

¹³ *The Observer*, 1/9/96

¹⁴ *International Herald Tribune*, 11/1/97 and *Armed Forces Journal International*, January 1997, p.54

¹⁵ *International Herald Tribune*, 18/1/97

¹⁶ *Jane's Defence Weekly (JDW)*, 8/1/97

¹⁷ *International Herald Tribune*, 18/1/97

¹⁸ *The Economist*, 7/9/96

¹⁹ *The Washington Post*, 28/7/96 and 3/9/96

²⁰ See A. Markusen, 'The Foolish, and Costly, Defense Merger Mania', *International Herald Tribune*, 11/1/97

²¹ HC 61, Para 67

US defence spending is twice as high as that of EU countries combined. In general, this means that the reduced number of US defence manufacturers can survive on US procurement spending alone. Any exports gained are an added bonus, enabling US companies often to be able to undercut their European rivals even possibly by offering products at below cost in order to eliminate foreign competition. Significantly, the transformation of the US market into one dominated by a small number of large companies has been accompanied by substantial cuts in production capacity. European consolidations have focused more on the reduction of overhead costs and, for political and cultural reasons, have found it more difficult to eliminate possibly surplus manufacturing facilities.

Outside the UK and Germany, the majority of European arms manufacturers have traditionally been state-owned. This has often made it easier for national governments to consolidate defence industries into national champions in reaction to the decline in defence business. In Italy, Finmeccanica now controls over 70 per cent of arms production. In Sweden, 50 per cent of the defence sector is owned by Celsius. Bonn encouraged the private company Deutsche Aerospace (DASA) to take over its rivals.²² The UK and French governments adopted differing policies.

In Britain, following the implementation of the Levene procurement reforms in the mid-1980s, the MOD purchased equipment on the principle of competition and strict value for money. Defence manufacturers themselves were left to their own devices to merge or rationalize as they saw fit. In France, the defence industrial sector had traditionally been divided into two halves: the state sector, largely supplying the domestic market; and the private sector, dependent on exports. Over time this distinction blurred with the state sector expanding to take over loss making private firms. Procurement spending was seen as part of industrial policy and state-run companies, such as GIAT and Aerospatiale, were not obliged to rationalize to any great extent, despite mounting losses. In the final years of the Mitterrand Presidency, French defence expenditure actually began to increase in real terms, largely in order to prop up defence companies.

Both British and French attitudes have changed in the last few years. The election of President Chirac in France heralded a wide-ranging defence review which extended to procurement policy and the defence industries. The French government is now prepared to force through a consolidation of the French defence industrial sector, with the aim of cutting procurement costs by 30 per cent. It intends to reorganize existing businesses into four industrial "poles", in aerospace, in electronics, in nuclear technology and in conventional armaments. The first pole, for example, involves the merger of the two French aircraft manufacturers, the state-owned Aerospatiale and the privately owned company Dassault, into a single unit in 1997 although this has faced considerable resistance from the latter. The

²² *SIPRI Yearbook 1996*, p.422

French review also accepted the impossibility of retaining self-sufficiency in weaponry and proposed heightened armaments co-operation with other European states.²³

Partly as a result of pressure from the defence industry and the House of Commons Defence and Trade and Industry Committees, the British government adopted a less Darwinist policy to the defence industries in the period 1994-1996. It is now prepared to give more consideration to the strategic industrial implications of defence procurement and to the needs of the UK defence industrial base. It condones international collaborative solutions to equipment requirements and international alliances, usually, although not exclusively within Europe. However, unlike France it continues to reject a pro-active role in defence mergers. Although opposing the concept of fortress Europe in defence procurement, the British Government has shown new enthusiasm for a European Armaments Agency whether achieved via the WEU or multilateral co-operation.²⁴

B. Cross-border Mergers

An example of new British thinking was the outcome of the Conventionally Armed Stand-Off Missile (CASOM) competition. Here, the MOD decided to award the contract to BAe which produced the Storm Shadow, a variant of a French missile, even when there was evidence to suggest that an American missile was a cheaper option.²⁵ This was done primarily to secure the marriage of BAe Dynamics and the French Matra missile businesses, part of a series of cross-border mergers in recent years, regarded as one solution to the decline in defence procurement. Other examples are the combination of Aerospatiale and DASA helicopter firms into Eurocopter and their missile businesses into Euromissile. Another is the merger of the French Thomson and British Marconi sonar companies. Such cross-border mergers or collaborations have taken place in the main, although not exclusively, within Europe.²⁶

At the time of the CASOM decision, the MOD stated that it "will strengthen British Aerospace's ability to play a leading role in a restructured European industry".²⁷ The tilt towards Europe was particularly significant in the light of the large MOD contracts awarded to US companies over the previous 18 months. These included the order for attack helicopters from McDonnell Douglas (worth £2.5bn) and new Hercules transport aircraft from Lockheed (a contract worth nearly £1bn), in preference to UK or European bids. (Although it should be pointed out that both these contracts included substantial UK industrial participation and offsets.) Taken together, these contracts were seen as something of a slap

²³ See J-Y, Helmer, 'Armement et renovation du systeme de defense', *Defense Nationale*, July 1996

²⁴ HC 61 and *Government Reply*, HC 209, Sess. 95-96 and Section IV

²⁵ *The Independent*, 25/6/96

²⁶ See p.13

²⁷ HL Deb 25/7/96, WA63

in the face to Franco-German desires for a stronger European defence industrial sector since the rejected bids included the Eurocopter Tiger attack helicopter and the as yet unbuilt Future Large Aircraft.²⁸

C. Joint Ventures

The third route open to European defence manufacturers beyond national consolidation and cross-border alliances, is the one of joint ventures or cooperative projects. Large multinational or bilateral defence projects have been a feature of European defence procurement since the 1960s. Early examples were the Anglo-French Jaguar and the later tri-national Tornado (Britain, Germany and Italy). Current multi-national projects include Eurofighter 2000 (EF2000, Britain, Germany, Italy and Spain), the Future Large Aircraft (FLA, eight European countries), and the Common New Generation Frigate (CNGF, Britain, France and Italy, also known as Project Horizon).

Although it is now widely accepted that European states are incapable financially of developing and constructing complex defence equipment on their own, joint ventures have both disadvantages as well as advantages. The aim is to spread development costs and also to increase production runs in order to reduce the burden on each national exchequer. In practice, multilateral projects have faced considerable problems. Efforts to agree specifications are often long-winded. The management of such programmes, requiring compromises between differing business cultures, has often been excessively bureaucratic. Until recent streamlining, the management of the EF2000 project involved four different layers of bureaucracy. Some meetings required 60 individuals to be present. Low-grade decisions were constantly passed upwards.²⁹ The Eurofighter has also been influenced by political indecision in Germany. Bonn nearly withdrew from the programme in 1992 and only remained on condition of a reconfiguration and stretching of the project. The implementation of these changes in some areas actually added to cost overruns.

Another problem illustrated by the EF2000 is the issue of *juste retour*. In procurement terms, this means that countries participating in a project must receive equal work or benefit in return for their inputs. When this principle is applied to the project overall, the effects may be reduced. However if individual contracts within a project are let not by competition but by the need to meet a national quota, then the impact can be pernicious. Participating countries may be interested not in the most cost-effective means of producing a particular sub-system but in boosting the capabilities of their own industries and acquiring the technological expertise of others. This process has apparently even led to the procurement of some sub-

²⁸ See p.12

²⁹ JDW, 26/8/96

optimal systems for EF2000 in order to ensure the participation of certain companies from consortium member countries which were technologically less advanced than others.³⁰

The process of allocating workshares within a joint venture can also be an obstacle to efficient procurement. In the EF2000 project, the original production shares were based on national off-takes of the entire production run. Germany indicated that it would buy 250 EF2000s out of the total of around 750. It was thus awarded 33 per cent of production work. Germany then reduced its order to 140 aircraft, Italy cut its requirement from 165 to 120 and Spain from 100 to 87. In contrast, Britain maintained its original EF2000 requirement. On a proportional basis, the UK would then have been allocated over 40 per cent of production work while Germany's share would fall to 23 per cent. Germany insisted that it be given 33 per cent of production work as originally suggested. The dispute, which had become a barrier to the authorization of EF2000 production, was eventually resolved in January 1996 with Britain reducing its outline order from 250 to 232 aircraft while Germany increased its order from 140 to 180 units. The workshares were readjusted to give Britain 38 per cent and Germany 30 per cent. The increased workshare is worth an additional £1bn to British industry.³¹

Taken together with the technical problems encountered in any high technology programme, the extra problems of excessive bureaucracy and political/budgetary turbulence in a participating country have added both extra cost and time delay to joint projects. Eurofighter was originally intended to enter service in 1998. It will not now join the RAF in squadron strength until 2003. Volker Ruhe, the German Defence Minister, has assured his counterparts in the Eurofighter project that funding will be found within the 1997 German budget to allow production to commence this year and there is some evidence of a compromise within the German cabinet to this end.³² However, longer-term funding may become entangled in the 1998 German federal elections and may not be absolutely secure.³³ The cost to the UK of the development phase of the project is now £4123m, some £1253m or 40 per cent beyond the original MOD estimate of £2870m made in 1984.³⁴

It might be assumed that lessons from the EF2000 programme would be taken on board in future multinational projects involving the UK. However, the National Audit Office (NAO) found in its examination of the Common New Generation Frigate project that this was not necessarily the case. Although a need for letting contracts by competition was built into the Memorandum of Understanding governing the CNGF, there was also an understanding that work share should broadly equate to cost share throughout the programme. The NAO found

³⁰ HC 61, Para 32

³¹ *The Financial Times*, 19/1/96

³² *The Financial Times*, 11/1/97

³³ *The Financial Times*, 25/11/96

³⁴ NAO, *MOD: Major Projects Report 1995*, HC 677, Session 95-96, August 1996, p.115

that this contradiction could inhibit the potential cost effectiveness of the project. The Office also held that insufficient time was being provided to reconcile different national requirements and that an in-service date of 2002 was optimistic. The ship may not enter service until 2006 and the project has been affected by the decision of France and Italy to reduce their orders to just two vessels a piece.³⁵

The Future Large Aircraft project is another example of the problems surrounding joint ventures. A requirement for a large air transport aircraft was first conceived in 1984. Project definition has involved Britain, France, Italy, Spain and Germany, as well as Belgium, Portugal and Turkey in more minor roles. Collectively, these states might require 300-400 transport aircraft. The UK withdrew from the project in 1989, although British participation continued with BAe covering UK costs itself. It soon became clear that aircraft would not become available until after 2000. The FLA project was thrown into further disarray in 1994 when the UK government opted to purchase 25 new US Lockheed C-130J transports, rather than refurbish its 60 existing Hercules C-130s and wait for the FLA to arrive. However, the MOD decided that this would be an interim solution only and that it retained a need for 25 transports and some additional air tankers after 2000. It would thus rejoin the FLA project pending its establishment on a commercial basis.³⁶ Italy has since adopted a similar policy and procured 19 new Hercules.³⁷

Although efforts continue to establish the project under the control of the proven Airbus Consortium, the FLA, seen by many as an important ingredient in the restructuring of the European civil aerospace industry, remains troubled. The French government has announced that it is unable to afford state-funding of FLA development which must be undertaken by the private sector. The German defence ministry is hardly able to afford Eurofighter, let alone a new military transport. The FLA project looks certain to face further delays if it can get off the ground at all.³⁸ In this light it is interesting that the MOD is apparently studying the possible lease of a small number of US McDonnell Douglas C-17 Globemaster heavy transport aircraft. This may on the one hand cast doubt on the UK rejoining the project or on the other reflect healthy scepticism as to its eventual success.³⁹

³⁵ NAO, *Ministry of Defence: Procurement Lessons for the Common New Generation Frigate*, HC 692, Sess. 94-95, pp.22-23

³⁶ *SDE 95*, Para 426

³⁷ *SIPRI Yearbook 1996*, p.425

³⁸ *The Financial Times*, 26/6/96

³⁹ *Flight International*, 22/1/97

III The US Challenge: The Joint Strike Fighter

European governments are faced with the quandary of how to respond to US competition (and also in the medium term to competition from the expanding Far East manufacturers) and to promote their defence industries. Although the UK government appears now minded to favour "cost-effective collaboration, usually within Europe", it is keen for UK companies to retain links with US defence manufacturers and what is generally the world's most advanced defence research.⁴⁰ UK defence companies are some of the few to have had much success in the US market with sales of, for example, the Hawk jet trainer and the Harrier. The purchase by Rolls-Royce of the Allison Engines company is one of the few examples of the US authorities accepting the foreign takeover of a US company with leading military technology capabilities.⁴¹ However, the 'two-way' street promised since the 1970s has never really materialized, with the balance of Anglo-American defence now standing at two to one in favour of the USA. There is some evidence of support for more open procurement in some sections of the Pentagon. Dr Paul Kaminski, the US Under Secretary of Defense for Acquisition and Technology, has worked to increase mutual co-operation with Western European companies and governments in US defence research and development projects.⁴² However, partly due to the power of Congress in defence procurement, the US defence market is effectively closed in many areas. Congressional committees vote on individual equipment acquisitions and Congressmen are often expected to provide 'pork barrel' contracts for their home states or districts rather than to acquire equipment on the basis of suitability.⁴³ There is some transatlantic armaments co-operation under the umbrella of the NATO Committee of National Armaments Directors but this, arguably, has been rather limited and has often had more impact within Europe than in the transatlantic context.⁴⁴

There is the view that excessive reliance on US weapons systems may ultimately lead European states to degrade their sovereignty in defence. It is the case that few defence products, even in the USA, are exclusively composed of components produced in one country. There is an increasing global interdependence developing in defence manufacturing. However, it may transpire that, overwhelmed by the competition of the powerful US megacorporations, European manufacturers may lose the capacity, as prime contractors, to manage and integrate sub-systems into a high technology defence platform. Some European

⁴⁰ HC 209, Para 3

⁴¹ *SIPRI Yearbook 1996*, p.418

⁴² Defence Select Committee, Minutes of Evidence, *Defence Procurement (2) Appointment of the New Chief of Defence Procurement*, HC 558 - i, Sess. 95/96 pp.32-33

⁴³ This is not to say that in the UK, where Parliament does not have effective control over the minutiae of the defence budget, political pressures cannot influence procurement decisions. In January 1996, the Secretary of State awarded a contract for new battlefield ambulances to the German-owned but British-based company Land Rover, after extensive lobbying by Midlands interests, in preference to an Austrian candidate, which would have been only partly manufactured in the UK. The latter had been recommended by the Procurement Executive as being more reliable and better value for money in the longer term (*The Financial Times*, 16/1/96 and HC Deb 18/1/96 c.738-739w).

⁴⁴ See p.20

manufacturers fear that the European defence sector as a whole may become merely a large sub-contractor for US weaponry, with the USA extending the monopoly that it already enjoys in some areas of defence equipment, such as airborne early warning, ballistic missile defence, stealth and space-based intelligence.

The strength of US competition and some of the problems encountered in collaborative projects with US manufacturers are evinced by the Joint Strike Fighter (JSF) project. This has grown out of the Joint Advanced Strike Technology programme (JAST).⁴⁵ The Clinton administration forced three US services, the US Air Force, the US Navy and US Marine Corps, to merge their respective fighter replacement requirements as a part of the Bottom-Up Defence Review.⁴⁶ The JSF is intended to succeed a number of US aircraft including the F-16, F-14, A-6, AV-8 (US Harriers) and early F/A-18s. This provides a domestic requirement for some 3,000 aircraft.⁴⁷ This is a huge figure in contrast to the outline order for 620 EF2000s (excluding any possibility of follow-on and export orders) and provides much scope for economies of scale. Although there will be different land and sea variants of the JSF, up to 90 per cent of the parts will be common. The aircraft is scheduled to make its test flight in 2004 and enter service in 2008.⁴⁸ In contrast, the EF2000 made its test flight in 1994 but will not fully enter service until 2003. The Pentagon is aiming for a unit price of around £20m. Even if this is optimistic, it compares favourably with the EF2000 unit cost of £36m.⁴⁹

The JSF could provide the leading new technology fighter of the next century and mark a new generation of fighter aircraft after the EF2000 and French Rafale. In December 1995 the British government signed a Memorandum of Understanding (MOU) with Washington under which it will provide £200m towards the \$2bn cost of the JSF demonstration phase. A JSF could replace the RN Sea Harrier after 2010; the UK has an outline need for some 60 aircraft. Up until 1995 the vertical take off section of JAST was a separate programme in which BAe had been involved since 1992.⁵⁰ BAe became part of a consortium with McDonnell Douglas and Northrop Grumman bidding against Lockheed Martin and Boeing for two £660m contracts to build JSF prototypes. In November 1996 it was announced that the McDonnell Douglas consortium had lost, a factor in the latter's merger with Boeing. This leaves BAe in something of a limbo but Boeing has announced that up to 15 per cent of the work on its JSF prototype will be sub-contracted abroad. Some contracts will be placed with Rolls-Royce, GEC and Dowty. Given BAe's close association with McDonnell Douglas, it would

⁴⁵ The Pentagon has only one other wholly new fighter project, the F-22 which is intended as a replacement for the F-15 aircraft.

⁴⁶ B. Sweetman, 'JAST Moves Closer to Reality', *International Defense Review*, June 1995

⁴⁷ *JDW*, 18/3/95

⁴⁸ G. Goodman, 'Joint Strike Fighter', *Armed Forces Journal International*, February 1996

⁴⁹ HC 677, Sess. 95-96, p.115

⁵⁰ *JDW*, 3/1/96 and HC Deb 20/12/95 c.1175-1176w A copy of the JAST framework MOU has been deposited (Dep.3S/2695).

seem possible that it may become involved in the Boeing prototype as well. The MOD is also seeking BAe involvement in the JSF demonstration phase.⁵¹

The JSF may also be considered as a candidate for the Future Offensive Air System (FOAS) which is intended to replace the RAF Tornado GR4 strike aircraft from 2015. MOD studies into the FOAS, costing some £35m, are soon to commence. The FOAS, formerly the Future Offensive Aircraft which has been renamed to allow for the fact that it might be unpiloted, could be provided either by a future version of the EF2000; stand-off air-to-surface missiles launched from air transports; an Uninhabited Air Vehicle (UAV); or an off-the-shelf design such as the JSF or F-22. Discussions have taken place with France which has a comparable requirement for a replacement of certain Mirage fighters. A joint, £6m Anglo-French project study on future aircraft weapons systems will soon begin. Germany and Italy also operate Tornado strike aircraft which may require replacement.⁵² There is therefore the possibility of some form of joint European FOAS project emerging.⁵³ However, in the event of an off-the-shelf US solution to the FOAS requirement, the capacity for Europe to manufacture future fighter aircraft independently of the USA could disappear. Denmark, the Netherlands and Norway have all shown interest in joining the JSF demonstration phase. Given that all operate the US F-16 fighter this may be an early indicator of a future JSF procurement in replacement.⁵⁴ Indeed, when the JSF becomes available it will be a candidate to replace most of the fighters which the USA exported in the 1970s and 1980s. A possible export potential of 3,000 aircraft has been identified.⁵⁵ The JSF would thus be a keen competitor for exports with the EF2000.

A decision on FOAS need not be taken for some time and there are serious questions to be addressed as to whether, for economic or political reasons, different sides of the Atlantic require separate next generation fighter systems. It is, however, the mainstay of US defence policy, reinforced by perceptions of US combat performance in the Gulf War and more recently by air offensive experience in Bosnia, that leadership in military technology is fundamental. As one commentator has stated, "for the United States, technological superiority is a sine qua non of its military strategy".⁵⁶ Indeed, a belief in the power of information technology and electronics are the key to the so-called Revolution in Military Affairs (RMA) which now dominates US military thinking. This has led, for example, to a policy of digitizing the battlefield - the eventual electronic linkage of every soldier, warship and aircraft into a single communications whole. It is debatable whether any European state will be able to afford this level of technological sophistication. Indeed, Kapstein posits that, in a post-Cold War world, it is futile for America's allies to seek to compete with the sole superpower

⁵¹ *The Independent*, 9/12/96 and *The Financial Times*, 18/11/96

⁵² *JDW*, 8/1/97

⁵³ B. Sweetman, 'Europe Contemplates EF2000 and Rafale Successor', *International Defence Review*, June 1995.

⁵⁴ *JDW*, 15/1/97

⁵⁵ B. Sweetman, 'Decision Day Looms for Joint Strike Fighter', *International Defence Review*, September 1996

⁵⁶ CSIS, *Defense in the later 1990s: avoiding the train wreck*, p.12 quoted in J. Van Scherpenberg, 'Transatlantic competition and European defence industries', *International Affairs*, January 1997

and that there should be a division of labour between the hegemon and its clients. It could be argued that there is already some evidence of this differentiation emerging within NATO where the USA concentrates on preparing for high intensity warfare, and acquires the sophisticated equipment deemed necessary for such operations, while some European NATO states are increasingly moving towards retaining a military capability only in peacekeeping and conflict prevention. Kapstein goes beyond this pragmatic policy of mutual advantage to suggest that it is in the interests of the USA as sole superpower to retain its preeminence and military advantage by preventing *all* possible economic and political rivals from keeping up with the US technological lead. Kapstein develops this argument to conclude that 'the rationale for [the USA] engaging in international arms collaboration has disappeared'.⁵⁷

The new Pentagon emphasis on exports also has implications for Europe's defence industries. Whereas in the past, US arms sales were primarily an instrument of security policy with beneficial commercial side effects, now their purpose may be more to assist US business. The US arms sales effort may have come to resemble that of Britain and France. Through the work of the Defence Export Sales Organization (DESO), financial and other high level state assistance, UK arms exporters enjoy considerable government backing. There is some additional evidence to suggest that the USA may use its superpower status to secure advantages for its defence exporters. New NATO members in central Europe will be required to re-equip themselves with armaments compatible with those of the existing members. In the short term the emphasis will be on communications equipment but will extend to fighter aircraft and other weapons. US favour and, particularly, US Congressional approval, is central to gaining the Alliance membership which so many central and eastern European states desire. The purchase of US arms might prove of assistance in this process. In a similar vein, the states of south-east and east Asia are keen to retain a US military presence in the region to counterbalance possible Chinese expansionism. The linkage with US defence exports may prove clear. Only in the Middle East, where both the UK and France have strong bi-lateral relationships, is there evidence of Arab states adopting a policy of deliberate multi-sourcing in order to spread their alliances and avoid excessive dependence on Washington.⁵⁸

Reliance on the USA for high technology defence goods, whether for purchase or on loan (as suggested by the Combined Joint Task Forces (CJTF) initiative), has costs and benefits. We have seen that there is a general assumption that, due to large production runs and the ever greater synergy of the US defence giants, US military equipment may almost always be cheaper than similar equipment manufactured in Europe. However, there are military, political and economic costs to this dependency, particular when an increasingly introverted US Congress plays such a powerful role in determining US external policy. During the conflict in the Former Yugoslavia, European NATO allies discovered that they were absolutely dependent on certain US military assets, such as heavy lift and satellite reconnaissance. However, they also learned that such assets can be withdrawn at short notice

⁵⁷ E. Kapstein, 'Towards an American arms trade monopoly', quoted in Van Scherpenberg

⁵⁸ Van Scherpenberg, pp.112-116

when, on a Congressional initiative, data from US satellite monitoring of the arms blockade of the Bosnian government was withdrawn in late 1994.⁵⁹

However, there are also risks involved in pursuing high technology projects independently of the USA. The fiasco of the Nimrod AWACs project in the 1970s and 1980s may be taken as an example. In this case, successive Labour and Conservative governments decided to develop an independent AWACs system and rejected the alternative of a US Boeing system which other NATO members were acquiring, partly in order to defend the UK defence industrial base. The Nimrod AWACs project was eventually cancelled after extensive time delays and cost overruns, amid doubts as to whether it would ever operate properly. Having written off £882m, the MOD then purchased the Boeing system at additional cost that it had originally rejected.⁶⁰

American competition may extinguish European manufacturing capability in other areas of defence technology. This could have further implications for the ability of European armed forces to conduct military operations independent of the USA and a more general impact on the security of European states. As the Defence Committee was told in 1995, "Whereas *capacity* could often be increased in an emergency, *capability* in advanced technologies would almost be impossible to recover once lost".⁶¹ However, the arguments against acceding to a US monopoly in the leading areas of defence technology are not only strategic but also economic. Although there may not be a direct link between defence and civil manufacturing, there is a degree of overlap both in terms of product and research.⁶² This may occur particularly in aerospace, computing and electronics. In the latter two sectors, for example, simulation, sensors and software all have dual civil/defence applications. Defence industries also contribute to Europe's skills bases. Indeed, given the increased onus on high technology in warfare, the traditional distinction between defence and civil industrial sectors could be said to be dissolving. If the European defence industry were to be merely an outbranch of, or grand sub-contractor for, the US defence giants, this could have implications for Europe's ability to compete in the future in a wide range of civil industrial sectors.

Although the USA and Europe are military and political allies, they are also fierce trade competitors. Despite attempts to strengthen Atlanticism in, for example, the shape of the New Transatlantic Agenda, it may prove increasingly difficult to separate the security from the economic aspects of the transatlantic relationship.⁶³ US attempts to impose extra-territorial

⁵⁹ *International Herald Tribune*, 19/10/95

⁶⁰ 86/87 prices PAC Forty-Seventh Report, *MOD: Major Defence Projects*, HC 371, Sess. 87-88, p.13

⁶¹ HC 61, Para 63

⁶² It has long been the contention of Airbus Industries that its rival Boeing is unfairly subsidized by the US government via the company's extensive state defence research and other contracts.

⁶³ The New Transatlantic Agenda was a document signed by Commissioner Santer, Felipe Gonzalez, the Spanish Prime Minister in his role as leader of the country holding the Presidency and President Clinton in Madrid in December 1995 promising, *inter alia*, greater transatlantic trade liberalization and political co-operation.

sanctions against European companies trading with Cuba and Iran have drawn strong and united European condemnation. As also shown by differences over Bosnia, it should not always be assumed that US and European security interests are synonymous.

IV Reforms

A solution to the European dilemma could be to move towards a pan-European defence market which might remove many of the political and managerial impediments to efficiency in European defence manufacturing. More agreement on common requirements, greater co-ordination in procurement and more open and competitive procurement practices within the Single Market, coupled with closer co-ordination of research and development, could result in major savings. In one academic study, it was estimated that greater competition within the EU might reduce overall costs by over 10 per cent. Longer production runs might additionally cut unit production costs by another 10 per cent. A European Commission study estimated that the measures described above might reduce costs by up to 17 per cent of existing expenditure.⁶⁴ It is often suggested that a more open European defence market would work to the advantage of UK defence industry which, hardened by a decade of the Levene reforms, might prove more adept at winning contracts in a more competitive European defence environment than many of the allegedly more cosseted continental manufacturers.⁶⁵

France, which has only recently finally abandoned autarky in defence procurement, favours a buy European policy. The French Defence Minister, Charles Millon has stated that "If we are to build a European defence industry, European states must be deterministic in their approach and choose equipment manufactured within Europe".⁶⁶ Volker Ruhe, the German Defence Ministers has declared that "Either there's a European defence industry or there's no defence industry" and has called for the creation of a truly multinational, pan-European defence industry in a decade's time.⁶⁷ There is the added question as to whether this should be a market governed by competition between rival European firms and open to US manufacturers, or a closed market with fixed contracts let only to companies from within the EU.

For both France and Germany closer armaments co-operation is a subset of the more integrated Common European Defence Policy, which they favour, and a more federal European Union. Although the UK government has stressed its support for intergovernmentalism in European defence co-operation, it is clear that closer armaments co-

⁶⁴ HC 61, Para 27

⁶⁵ See and also more generally N. Hooper, 'Problems of Procurement', *Defence Review*, Autumn 1996

⁶⁶ *JDW*, 30/10/96

⁶⁷ *The Guardian*, 16/11/96

operation is related to the effective operation of the Common Foreign and Security pillar of the Union.

A number of ways of achieving a Europe-wide defence market have been discussed.

A. Repeal of Article 223

One reform might be the repeal of Article 223 of the Treaty of Rome. The Article sanctions any Member State to "take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material". It thus excludes European defence industries from Single Market rules on, for example, public procurement and state aids. It should be pointed out, however, that Art. 223 does not cover so-called 'soft' defence procurement, that is goods not of a specifically military nature procured by national defence ministries, which are covered by EC public procurement directives. These rules governed, for example, the award of a contract for 'B' or rear echelon vehicles for British forces in Germany in 1996.⁶⁸ The Commission has supported the repeal of Art.223, believing that it would lead to increased internal competition, reduce duplication in R & D and produce other economies of scale.

The repeal of Art. 223 was on the agenda of the 1991 IGC but was dropped. It has also been discussed in the current IGC, both in the Reflection Group and also in the current IGC negotiations. However, it now appears to have been rejected again in the latest deliberations, presumably on the grounds that the Members States are not generally willing to compromise their freedom of action in this area.⁶⁹

B. The Western European Armaments Group and a European Armaments Agency

Despite the reluctance to amend Article 223 at Maastricht, it was decided separately to pursue an armaments initiative within the context of the Western European Union (WEU). The WEU Maastricht Declaration No 1 called for "enhanced co-operation in the field of armaments with the aim of creating a European armaments agency". In May 1993, under the umbrella of the WEU, the Western European Armaments Group (WEAG) assumed the activities and responsibilities of the Independent European Programme Group (IEPG). IEPG had been created in Rome in 1976 to assist co-operation in defence research, development and

⁶⁸ HC Deb 18/1/96 c.740w

⁶⁹ EC/IGC/CONF.3956/96

procurement. WEAG also absorbed the armaments functions of the NATO Eurogroup. WEAG has thirteen members, the ten WEU full members, Denmark, Norway and Turkey. A series of arrangements for co-operation with the NATO Conference of National Armaments Directors (CNAD) exist.⁷⁰

WEAG has been somewhat limited in its work. It has continued the role of the IEPG in seeking to harmonize defence equipment requirements and procurement standards and it also runs the EUCLID (European Cooperative Long-term Initiative in Defence) research projects. Discussions have also taken place in WEAG on moves to liberalize and rationalize the European defence equipment market and the creation of further opportunities for joint research. The latter might involve, for example, common rules on defence contracting and on intellectual property. The Group has also been re-examining the prospects for a European Armaments Agency which made some slow progress at the WEU Council in Ostend in November 1996. On that occasion, the decision was taken to establish the Western European Armaments Organization (WEAO) as a WEU subsidiary. WEAO will, *inter alia*, provide WEAG's Research Cell from April 1997. It will run the EUCLID research projects and, as the sole contracting body, assume the activities normally executed by the lead state in each project. Differing national rules on contracting are a key impediment to a free defence market and it is hoped that the limited role of WEAO will act as a marker for the future.

C. The Quadrilateral Agency

Work in WEAG on a European Armaments Agency should not be confused with the Franco-German initiative for a joint armaments agency. France, in particular, had wanted Maastricht to launch a fully-fledged armaments agency and was frustrated by the failure of the last IGC to produce one. At a summit meeting held in Bonn in December 1993 between the then French Defence Minister, Francois Leotard, and his German counterpart, Volker Ruhe, the intention to establish a joint armaments agency was announced. The Agency was to be given the task of managing numerous Franco-German arms projects with a view to improving their efficiency and producing savings, particularly in administration. The Agency would replace the current system whereby each joint project was managed by a separate joint management office, subject to the additional verification of national offices. The Agency also aims to promote equipment standardization amongst European multilateral forces.⁷¹

The Franco-German body was scheduled to be operational from mid-1994. In the event, legal problems hindered this and the pilot Agency was not opened until January 1996 and even then

⁷⁰ CNAD acts as a forum for NATO armaments co-operation and *inter alia* explores possibilities for joint procurement. Successes include the NATO AWACs squadron and failures the abortive NATO frigate project. NATO research activities have recently been reorganized under a new Research and Technology Organization.

⁷¹ WEU Assembly Report, *The European Armaments Agency*, Doc. 1419, May 1994

an MOU laying down its legal status had yet to be signed. The Agency will manage all joint Franco-German procurement projects. These include the Tiger attack helicopter, the various Euromissile programmes and bi-national satellite projects. The Agency is also intended to oversee French and German participation in multilateral projects, ranging from general procurement for the Eurocorps to the NH-90 helicopter, although this has yet to start.⁷² Germany and France appear to have decided to pursue their own independent armaments agency project, partly as a model for a European Armaments Agency. Indeed, they would like the Agency to pass under the overall auspices of the WEU in 1997.⁷³

The UK was formally offered membership of the Franco-German Armaments Agency at a trilateral meeting of British, French and German defence ministers held in Paris in March 1995.⁷⁴ This followed a British request to join the then Franco-German programme to build a new Multi-Role Armoured Vehicle (MRAV) in February. By adding the British requirement to those of France and Germany, a larger production run could be created with the prospect of large scale cost savings. It would also assist co-operation between the armies of all three nations, which are increasingly likely to operate together as they have done in Bosnia.⁷⁵

A formal decision to proceed with the tri-national MRAV, subject to the amendment of tender documents to reflect UK requirements, cleared the way for Britain to indicate that it desired to join the Agency in March 1996.⁷⁶ Further clarification of tender documents allowed Britain to enter into the negotiations on establishing the Agency in July. Mr Arbutnot stated that "The new armaments structure offers the opportunity to improve the effectiveness of co-operation between our countries to meet the requirements of our armed forces. It will also provide a platform for the development of a more efficient and competitive European defence industry."⁷⁷ The MRAV would be the first project to be managed from the start by the new Agency.

Italy, as well as Britain, expressed interest in joining the body. The entry of these new states greatly complicated agreement on a founding Memorandum of Understanding. Britain, France, Germany and Italy eventually signed an MOU on the newly named Quadrilateral Armaments Structure on 12 November 1996.⁷⁸ The Agency employed only 15 staff in November 1996. Apparently, the UK has been assured that the Agency will not follow a policy of implicit European preference and that purchases from the US will not be ruled out.⁷⁹

⁷² *JDW*, 17/1/96

⁷³ *The Financial Times*, 4/10/96

⁷⁴ *The Financial Times*, 28/3/95

⁷⁵ *The Times*, 22/2/95 and 12/4/96

⁷⁶ HC Deb 18/3/96 c.68w

⁷⁷ HC Deb 22/7/96 c.76-77w

⁷⁸ HC Deb 12/11/96 c.114w

⁷⁹ *The Financial Times*, 12/11/96

More significantly, the old practice of institutionalized workshares, which has, for example, bedeviled the EF2000 project, seems to have been dropped. Belgium and the Netherlands may also join.

The establishment of the Quadrilateral Agency marks an important development. The UK was initially rather sceptical of the Franco-German initiative, fearing a protectionist enterprise. The MOD's change of heart perhaps reflects the wider changes in the international arms market, an internal policy review and also shifts in French procurement policy discussed above. All Quadrilateral members may also have been influenced by the lack of progress, after over three years' negotiations, on the principles of a common armaments market in WEAG. Indeed, frustrated by the apparent resistance to the ending of *juste retour* by many of the smaller states in WEAG, the leading European defence industrial nations appear to have decided to pursue their own multilateral initiative. Should the Quadrilateral Agency be expanded to include new members or later be brought within the WEU ambit, the four existing states may present a *fait accompli* on the shape and principles of a European arms market to the other WEAG states.

V Conclusion

European defence industries and defence industrial policy have generally been slower to adapt to the smaller post-Cold War market than their US counterparts. It is now realised that no single European country can afford to produce a large, high technology weapons system on its own. At present, Europe is manufacturing three advanced fighters: the French Rafale, the Eurofighter 2000 and the Swedish Gripen. The next generation fighter aircraft, if it is to be constructed in Europe at all, may be built by a single pan-European consortium. The number of cross-border mergers and other joint ventures has risen, contributing to an increasing rationalization.

Europe seems to be moving incrementally towards a more open defence market, although important differences remain between states on the level of competition and external access. In the medium-term decisions may need to be taken as to whether Europe can retain an independent defence manufacturing capacity in a wide range of sectors or whether the USA will be allowed to extend its monopoly to the economic and possible security detriment of the European Union.

Under a more interventionist Clinton administration, the USA may have created a new form of military-industrial complex which aims to serve not only the interests of the US armed forces and industry at home but also, with new emphasis, US foreign and commercial policy abroad. It may be impossible for the European defence industrial sector to achieve the same

level of organization and direction. As a reaction certain industrial leaders, the Managing Director of British Aerospace, for example, have suggested that the moves towards a more open defence market need to be taken further and faster with the establishment of a single pan-European Defence company or a number of European firms, one for each defence industrial sector, as the only means of withstanding the weight of US competition. Thus, there could be a single European defence and civil aerospace company, for example, perhaps modelled on Airbus, a single European missile company, a single Euro-electronics firm, and so on. Only then might contracts within pan-European defence projects be allocated on a rational rather than national basis with single managements and single production lines.⁸⁰ There are plans, announced in July 1996, to turn the civilian Airbus consortium into a limited company with share holdings held initially by the existing national partners.⁸¹ Such a development in the defence sphere would require significant political changes in European governments, which whether statist or freemarket by instinct, have supported national defence champions in the aerospace sector.⁸² If large pan-European defence conglomerates and a true single defence market are to be established, whether via the Treaty of Rome or reciprocal agreements between European states, then this will involve the compromise of national sensitivities and the likely sacrifice of many more defence jobs.

In the October 1996 debate on the *Statement on the Defence Estimates*, the Defence Secretary, Michael Portillo, addressed the question of the future of the defence industries. He declared: -

Collaboration in Europe serves two purposes. The first is to provide competition against American products in the short term. In the longer term, America and Europe will face strong competition from the Far East. In both instances, European industry must strengthen itself to face the competitive challenges that lie ahead.

... the Government want to give political support to changes in Europe that are industrially driven. Industrial logic should dictate the formation of industries in Europe, not political diktat. Clearly, we are in for a period of change.

... Nothing that I have said about European collaboration should be held to be exclusive. British companies also have important joint ventures with American companies. It is extremely important for British companies to maintain the flexibility to operate with partners in both continents and, indeed, even more broadly than that.

On European competition, we face the problem that the United States have production lines for its armed forces which are 10 times as long as the production lines of any one European country. We should think about how to restructure and produce

⁸⁰ *The Economist*, 7/9/96

⁸¹ *The Observer*, 1/9/96 and 'The Boeing-McDonnell Douglas Marriage: Omen or Opportunity', *RUSI Newsbrief*, January 1997

⁸² *The Economist*, 7/9/96

collaboratively so as to have longer production runs. We must do better than we have done on Eurofighter, because the delays are making the product uncompetitive.⁸³

The government's policy on international defence industrial co-operation essentially follows a twin-track approach of sanctioning European collaboration but at the same time retaining links to American technology and the US industry. This twin-track aspect of defence procurement policy, although not others, is broadly shared by the Labour Party, although Labour in government would assume a more interventionist role. The Labour Party has also promised a defence review within six months of gaining office. The review would examine defence procurement policy and would, presumably, also address the longer term challenges facing the UK defence industrial base. Labour policy on defence procurement and European defence collaboration was set out in a policy document published in 1995: -

Labour fully supports industry's call for a more constructive role from the government in the terms of pursuing European collaborations in procurement projects. Shared R&D costs, increased production runs and a wider market are required if Britain's defence industrial base is to remain a world class competitor. Once again the Tories' isolation in Europe is threatening the British defence industry, and damaging our vital national interest in preserving a strategic defence industrial base.

Labour will actively work in partnership with the UK defence industry in order to pursue the conditions required for such collaborations. We will take a positive approach in Europe where Britain should be taking a lead with the development of such policies. The United States, with its considerable R&D investments, remains at the cutting edge of defence technological innovation. Britain should not turn its back on this source of technological exchange, as the continuation of this exchange is essential to the successful maintenance and development of Britain's defence industrial base.

Britain has recently procured several major defence systems from the United States. Currently Britain buys about \$2 billion of equipment from the US annually, and they only buy about \$1 billion from us. Labour will promote the acknowledged strengths of the British defence industry, its leading-edge innovation and world-class competitiveness. We will seek to enhance the effectiveness of the mutually beneficial technology transfer "two-way street" between Britain and the US; and to achieve a greater balance in defence trade.⁸⁴

The Liberal Democrats support moves towards European defence procurement and European defence industrial collaboration. In a recent article Menzies Campbell, the Liberal Democrat defence spokesman, declared: -

⁸³ HC Deb 14/10/96 c.486

⁸⁴ Labour Party, *Strategy for the Future: Labour's approach to the defence industry*, October 1995

If Britain's defence industry is to flourish in the Twentieth Century it will have to recognise the importance of collaboration with European companies ...

The fact is that Britain can no longer really afford, politically or financially, to pursue a foreign and defence policy separately from her major European partners. Against the background of reducing defence budgets across Europe we shall only be able to maintain an appropriate range and depth of capability if we increase co-operation within the defence industry. It is to be welcomed that the United Kingdom recently joined the European Armaments Agency, which was established by France and Germany to oversee joint arms production. It seems that the present government is at last recognising the inevitable that it is crucial to have a strong defence industrial base in Europe.

In the struggle to find new markets Europe needs to compete with the American defence companies. The defence industry in the United States is far more powerful and technologically advanced than in Europe. European companies must waste no time losing out to the American market and should work together to rectify the imbalances. Governments should encourage cross border alliances between defence companies.⁸⁵

Since the Second World War the history of international trade has generally been one of the lowering of trade barriers and the establishment of a single world market. However, the increasing globalization of the arms trade has not been accompanied by a genuine free market in defence goods. Defence procurement is still largely governed by purely national needs whether they be to promote domestic industry and technological advantage or to underwrite alliances and diplomatic actions. The main exception is within the European Union where Member States, either by intergovernmental or Treaty arrangements, hope to secure some of their national defence industrial interests by action on a continental scale. Against this background it remains to be seen whether the twin track approach of European collaboration and retaining links to the US defence industries will be sustainable in the longer term.

TD/JML

⁸⁵ Menzies Campbell, 'We Musn't Lose Out to Uncle Sam', *The House Magazine*, 25/11/96

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