



UK Defence Policy: Implications for
Equipment & Budget

**A DECISION THE NEXT
PRIME MINISTER
MUST MAKE...**

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Introduction

By **Winston S. Churchill** President, UKNDA



The UKNDA is proud to present this paper by Tony Edwards, written from the perspective of a distinguished and independent industrialist with a background in defence and aerospace in four countries and with additional experience in both government and academia. Its main thrust is the need to address the critical decisions that must be taken within the next 18 months on the future size and equipment of the armed forces and, above all, the funding of defence.

This paper represents an important contribution to a vital debate that will determine the future course of the UK's foreign & defence policies, under whoever becomes Prime Minister following the forthcoming General Election. The outcome of this debate will decide whether the United Kingdom continues on the path of the past 12 years, slipping relentlessly – by decision or by default – into the second division of nations, no longer playing a significant role on the world stage, and unwilling or unable to defend her wider interests alongside the United States of America or, alternatively, decides that it wishes to continue to 'punch above its weight', maintain its seat at the top table and play a significant role on the world stage.

But, as this paper makes very clear, if we chose the latter course, the next Prime Minister and Government will have no choice but to offer decisive leadership to the nation, and personally demonstrate the courage to make good the shortfall in defence funding of the past 10 'locust years', during which the armed forces have been stretched to breaking point by a combination of over-commitment and under-resourcing.

The UKNDA, which exists to campaign on behalf of our armed forces and to secure adequate funding for our nation's defence, welcomes this paper and hopes that it will not only spark a debate on the decisions required to shape the future status of our nation, but force our political parties to address the questions, not just of social security but, far more importantly of national security. The political parties must make clear to the electorate where they stand on this vital issue on which may depend, at some not too distant point in the future, our very survival as a nation.

If there is a candidate out there, aspiring to the Premiership of the UK, who is willing and able to lead our nation back towards our traditional role as a key player, it is important that the electorate should know of it and that they declare themselves for, up to now, none of the principal parties has been willing seriously to address this, the most vital aspect of our nation's future.



Winston S. Churchill,
President, UKNDA

The views expressed in this paper are those of the author. The following Patrons and Vice-Presidents of the UKNDA have reviewed the paper and are pleased to endorse its analysis and recommendations:

General **The Lord Guthrie**
Marshal of the RAF Sir **Peter Harding**
Air Marshal **Ian Macfadyen**
The Rt Hon **The Lord Owen**
Admiral Sir **John Treacher**

A decision the next Prime Minister must make . . .

The last Strategic Defence Review (SDR) was undertaken in 1998 and the die is now cast for the remaining months of this Government. As the former Prime Minister, Tony Blair, said in his last speech on the subject of defence, ‘The nation must decide what we want our country to do in the world and then fund it, so that it does not slip by default into the second division’. A major decision with respect to foreign and defence policies and their funding awaits the next Prime Minister and this decision can no longer be fudged.

We could decide to continue with our current liberal interventionist, expeditionary and proactive foreign and defence policies, working and if necessary fighting alongside the United States, but then we must fund them adequately. This funding would have to involve repairing the damage as a result of over-stretch, filling the equipment gap and allowing for an appropriate tempo of operations.

Alternatively, we could decide to lower our profile in the world at large and compromise towards more reactive foreign and defence policies. When played out, this would represent the most radical shift in the nation’s priorities in more than two centuries. Perhaps this course already has been decided upon by default. Indeed, this course of action would be compatible with our current trajectory. As if to reinforce this impression, defence spending has been ruled out as a fiscal stimulus.

The Government has become aware recently that US institutions no longer value so highly the desire and commitment of the British armed forces to operate alongside their American counterparts. Recent reports from the US show serious dissatisfaction with the British contribution to both the Iraq and Afghanistan operations. However, this in no way reflects badly on the acts of almost unbelievable courage carried out daily by both men and women in theatre as they are forced to ‘punch above their budget’.

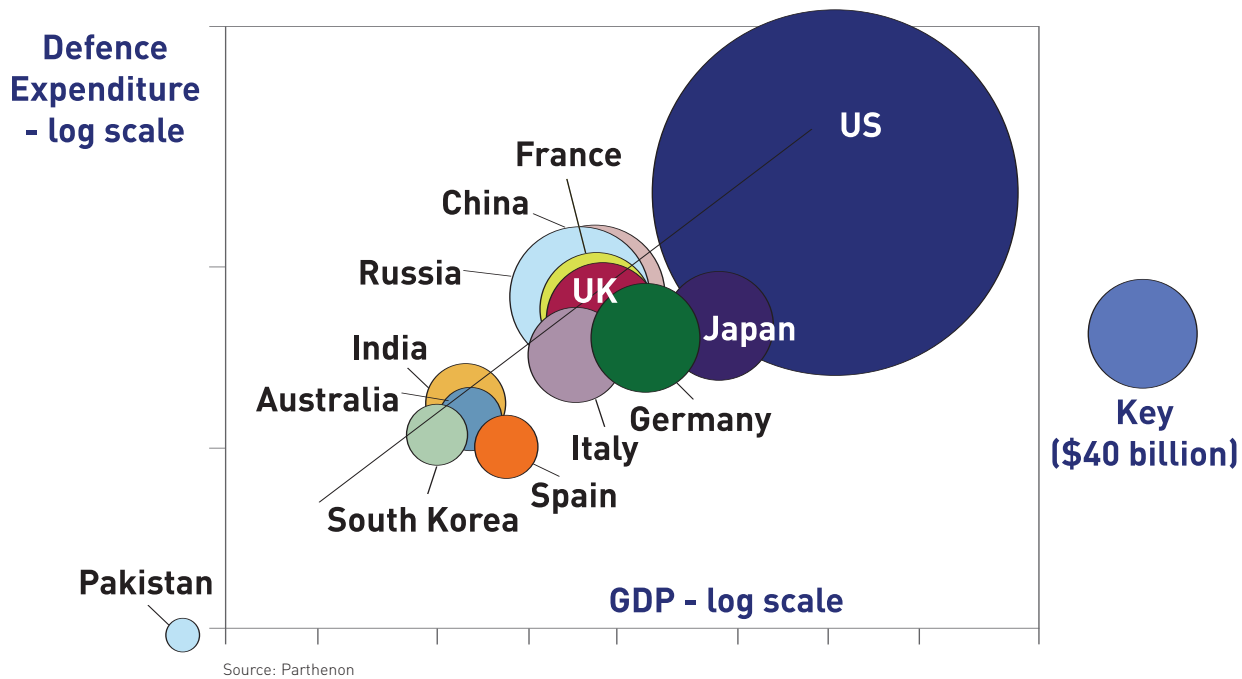
The ‘special relationship’, based upon the UK being the main contributor to NATO, after the US, is now at serious risk. In this context it is important to remember that the UK’s capability to defend its worldwide interests is increasingly dependent on US technology and operational know-how. However, the United States no longer has a ‘built-in bias’ towards Britain, and the US President has personal reasons for reacting to the British colonial legacy by reaching out for other ‘first-call’ allies. This has happened before with former US Presidents but they have invariably turned back to the ‘special relationship’ with the UK at the first whiff of grape-shot when the alternatives have all run for cover. However, this may not happen next time when the UK will have little to offer because of the worn-down condition of our armed forces and their equipment which will require five to seven years to recover from their current over-stretch.

The need to align the UK’s foreign and defence policies

Any discourse involving defence necessarily must start with aspects of foreign policy. Defence policy must follow foreign policy, as was stated in the 1998 SDR, but above all there must be alignment between the various policies. They must become united in principles, relationships and interests. Extending from the defence policy there must be compatible industrial and technology policies.

The problem today is that our foreign and defence policies not only lack alignment but have become disconnected. Because of this, our foreign policy options are becoming truncated. Our defence capability which supports our foreign policy is being degraded by the extended period of overstretch of our armed forces – the operations in Iraq and Afghanistan have lasted longer even than the whole of World War II.

Defence spending – driven by protection of GDP



This analysis was conducted in an attempt to answer the question why and how much should countries spend on their defence. The chart plots defence expenditure versus GDP on logarithmic scales which more usefully show trends. It is perhaps not surprising that there is a correlation between defence expenditure and GDP. The bigger the country in terms of wealth, the more it has to defend. The chart suggests that countries spend a specific percentage of their wealth each year on their defence. The figure of 3% GDP tends to separate the more serious from those who are less serious about the role of defence. The chart is dominated by the United States which spends at least 4.2% of GDP which is nearly half of the total global expenditure on defence. There is an interesting cluster of nations in the \$40-60 billion range; however the Chinese and Russian numbers probably are understated.

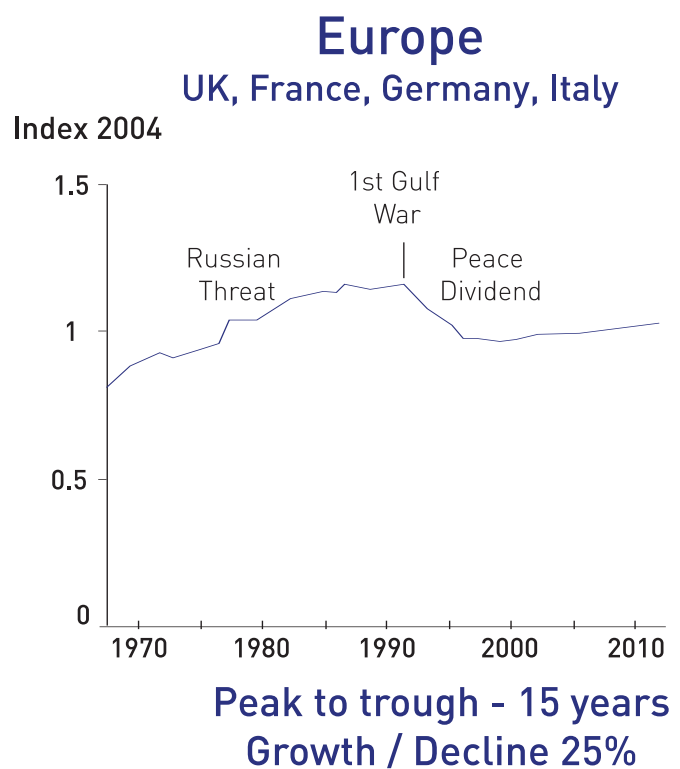
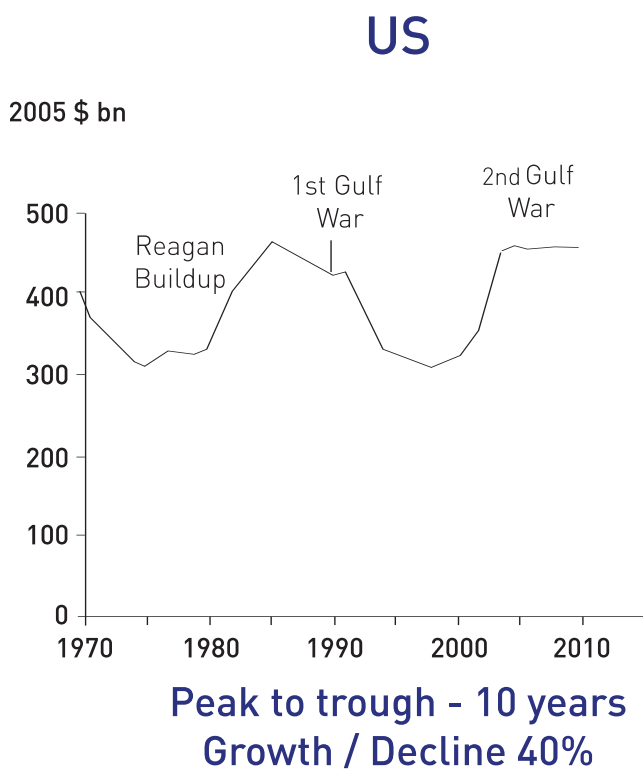
It is more helpful to analyse the various expenditures in terms of percentage of GDP than in absolute dollars. Percentages of GDP automatically correct for major distortions due to currency fluctuations (e.g. the UK defence budget, expressed in US dollars, has declined by 30% in recent months!)

Countries tend to look at defence expenditure on a long-term basis as an insurance policy. It follows that it is important not to reduce 'coverage' this year just because the house did not burn down last year! Along with the humanitarian dimension there are important issues of national interest, such as security of energy supplies, which need the UK to maintain the capability to intervene in overseas trouble spots. This cannot be done 'on the cheap'.

Defence spending is highly cyclical

These charts show the defence expenditure of the United States and the four major defence spending countries of Europe. Not surprisingly, conflicts or potential conflicts drive up expenditure and it tends to decline whenever the outlook is more benign. Defence expenditure changes are more frequent in the US with the time between peaks and troughs being ten years whereas the peak to trough in Europe takes 50% longer. In the United States the volatility can be as much as 40% of the peak compared with only 25% in Europe. One other difference is that defence cuts in Europe tend to be across the board whereas in the US spending on defence Research and Technology (R & T) is increased during periods of downturn. This reflects the understanding in America that prudent R & T investment today directly affects defence capability 20 years from now.

The downward trend of defence R & T expenditure in the UK is alarming because of the long-term consequences to the UK's defence capability. This issue was highlighted long ago by Michael Portillo when he was Secretary of State for Defence, but has only worsened since then.

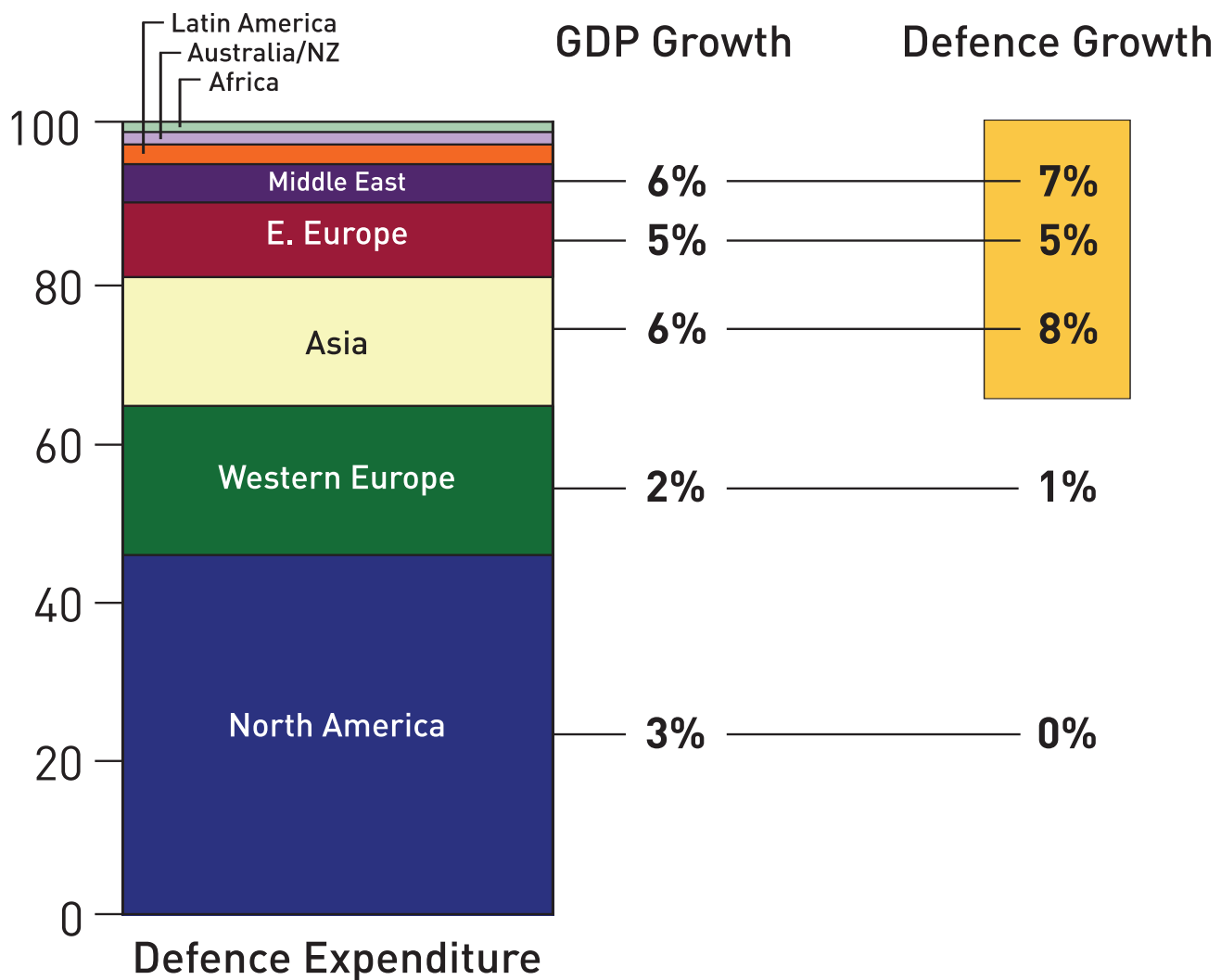


Source: Parthenon

High growth in spending outside Europe and North America

This chart displays the world's defence expenditure split by region. North America and Western Europe account for well over 60% of total defence spending. However, economic growth is relatively sluggish compared with Asia, Eastern Europe and the Middle East. As defence expenditure tends to be a percentage of GDP, defence growth in North America and Western Europe is low as well. On the other hand, defence growth in the high GDP growth areas of the world tends to be even higher than GDP growth. This helps to explain why the export market for defence equipment remains buoyant in such areas.

Perhaps the most extreme example is the People's Republic of China, where GDP is growing currently at 8% - 10% per annum while defence spending is increasing even faster at a rate of 12% per annum and the total defence spending is probably twice the published figures. To those who assert that China can achieve its international objectives by commercial means, I would direct the question: why then do they need to spend so much on increasing their defence capability? The answer probably is tied to their perceived need to secure energy and raw material supplies on a global basis.



Source: Parthenon

The UK defence procurement back-drop

- **International collaboration**

The United Kingdom's position in the world in terms of foreign and defence policy is extremely complex, mainly because of the large number of international collaborative bodies in which the UK attempts to play a major role. The situation is far more complex than for any other European country and is second only to that of the United States. Britain continues to play a major role alongside the United States, within NATO, within the EU, within the European Defence Agency and is an integral part of the most sensitive sharing of intelligence between US, UK, Canada, Australia and New Zealand (the so-called 'five-eyes').

- **Continuous operations . . . Overstretch and 'punching above the budget'**

The United Kingdom's armed forces have been engaged in almost continuous operations for the past twenty years. Most recently this situation has degenerated into what can only be described as 'overstretch'. It used to be said that Britain 'punched above its weight' in world affairs, more recently this has meant that our overstretched armed forces have had to 'punch above their budget', a far more difficult feat. Currently, it is proving impossible to maintain 12,000 troops in theatre while meeting the harmony guidelines. If the Prime Minister goes along with the new US President's request for more troops for a surge in Afghanistan then once more the 'politicians will take the credit while the troops will take the strain.'

- **Defence Change Programme**

The Ministry of Defence has been involved in an almost continuous Defence Change Programme since the last Strategic Defence Review (SDR). The benefits that should have accrued from this have not materialised to the full because insufficient funding was provided to cover the upfront costs. However there have been significant gains in the field of long term equipment support because of effective partnerships with industry.

- **Large Equipment Programme**

Ever since the SDR of 1998 there has existed an ambitious but unrealistic (because only partially funded) equipment programme. The cumulative funding gap has increased steadily and a RUSI study suggested that it is now at least £15Bn.

- International Collaboration - USA, NATO, EU, EDA, "Five Eyes"
- Continuous Operations.....Overstretch
- Forced to 'punch above its budget'
- Defence Change Programme (partially funded)
- Large Equipment Programme (partially funded)
 - Network Enabled Capability
 - Typhoon (third tranche)
 - Air Tanker (FSTA)
 - Air Transport (A400M, C-17)
 - Nimrod (Technical/Cost)
 - Helicopters
 - UAVs (Watchkeeper...)
 - Naval Carriers (CVF)
 - JSF/F-35 (STOVL?)
 - Naval Destroyers (T-45...)
 - Armoured Vehicles (FRES?..)
 - Joint Training (Technical/Funding?)
 - Pilot Training (Hawk)
 - Trident Replacement (unfunded)



The UK defence procurement back-drop *contd.*

Network-Enabled Capability: The UK followed the US and embarked on the Revolution in Military Affairs (RMA). The UK defined its lower cost version of ‘network-centric warfare’ as ‘network-enabled capability’. The Network-Enabled Capability Programme (NEC) was neither fully defined nor fully funded. However, major segments of the programme have been undertaken. For example, the tactical radio network system was procured through a tortuous route. The originally intended supplier was abandoned for political reasons but the final system can never fully satisfy its intended users.

On a more positive note, industry experts in the field of defence Information Technology (IT) are now being harnessed to work together with their MoD colleagues in the pre-competitive areas. In spite of the bad publicity about Government procurement of major IT systems, it is little recognised that the UK retains significant expertise in the field of defence IT. This expertise will always be critical to the operational effectiveness of the Armed Forces with whatever hardware they are equipped.

Typhoon: The Eurofighter Typhoon is the ultimate conventional fighter aircraft but requirements for such a piece of equipment have changed so much in the last two decades since it began its glacial life. It is now clear that if we had allowed Germany to withdraw in the early 90’s and then had taken over the programme ourselves, the RAF Typhoons would have been delivered earlier with better-matched capabilities at no higher cost to the UK. Ironically, the work-share between the nations for pragmatic reasons would probably have remained the same. The UK is now in the same budget trap in which Germany found itself in the early 90’s. There is very little flexibility allowed in this Euro-joint programme.

AirTanker: The MoD, late in the day, conducted an extensive competition for the new Air Tanker system. The Italians and the Australians held their respective competitions shortly thereafter. The upshot is that Australia and Italy are taking delivery of their aircraft while we have hardly started. The lack of capital budget is the main explanation for such a prolonged negotiation and the eventual contract on a Private Finance Initiative (PFI) basis will ensure future taxpayers will be burdened with the most expensive way imaginable to provide air tankering.

AirTransport: More than 12 years ago the previous Government fudged the air transport decision by buying C-130Js from Lockheed-Martin, leasing C-17s from Boeing, and reluctantly signing up to the A400M programme with umpteen European partners. The RAF did not want the A400M but would have liked more C-17s. The A400M started off as a low risk conventional technology military transport aircraft but has morphed into a technology demonstrator for Airbus with a unique engine, gearbox and propeller combination which is attempting to defy the laws of physics. Because of the delays on the A400M, the MoD has now bought the originally-leased C-17s by effectively paying for them twice and some of the extra C-17s that the RAF originally wanted. The A400M is the first military aircraft to be attempted by the hitherto successful Airbus (formerly a consortium but now part of EADS). The situation with the A400M is now so serious that EADS has been forced to refute rumours of cancellation. This would be an even bigger set-back or embarrassment than even the A380 delay.

Nimrod: More than ten years ago an extensive competition was arranged in order to choose a new maritime reconnaissance aircraft. When the Nimrod (a derivative of the 1947 De Havilland Comet) was chosen it was feared by the Ministry that all of the competing consortia were ‘buying in’, but one had to be chosen. The winning team rushed at break-neck speed to place all of the key suppliers on contract despite being warned that the specifications for the subsystems were not adequately defined. As predicted at the time, it all led to tears. Both the company and the MoD took financial and schedule ‘hits’ and a new schedule and price were agreed. Even now, there are constant rumours about technical and cost problems and consequent doubts about its future. As the Swedish government concluded a long time ago, the biggest single contributor to defence project cost overruns is ‘delay’ for whatever reason.

The UK defence procurement back-drop *contd.*

Helicopters: Ever since the ‘Westland’ affair, the strategy for helicopters has remained cloudy. No one is really happy with the result, least of all the combat troops (especially the seriously wounded in Afghanistan). The best situation obtained was a ‘partnering’ agreement between Agusta-Westland (now wholly foreign-owned) and the MoD as a result of the Defence Industrial Strategy. Unfortunately, it is difficult to make progress when the customer-partner has no money. So we have ended up buying US helicopters to a specification that the UK authorities can not certify as safe to operate and buying back helicopters originally sold to Denmark with the attendant cost of converting them to UK specifications and buying reduced numbers of new UK helicopters after much dithering. The troops in theatre are still waiting for one of their highest priorities. Lack of helicopters has led to many casualties due to the necessity to ‘go by road’ with the additional risk of IEDs (improvised explosive devices).

UVAs: Unmanned Air Vehicles and Unmanned Conventional Air Vehicles (UCAVs) represent the last area of aeronautical systems where the UK industry can claim total systems expertise. Yet, investing in the development of an indigenous UK capability has been relegated to third priority. The bulk of the relevant funding has been directed to acquiring Israeli technology through a French-owned but British based company and then to a US product which we are allowed to operate but not even ‘look inside’.

Naval Carriers: I fear that the stumbling progress of the two naval carriers has only just begun. Technically they are on contract with full steam ahead for their inevitably delayed introduction! If we are to continue with the proactive interventionist foreign policy then fast jets, heavy armoured fighting vehicles, and aircraft carriers with escorts are the sine qua non. Whether only two very large ships which will enter service relatively defenceless when left to their own naval resources is the right solution is still open for debate. The estimated cost of the carriers is part of a subliminal understanding between industry and officials. It is in neither of their interests to acknowledge the potential costs at this delicate stage.

Joint Strike Fighter (JSF/F-35): The aircraft for these two carriers are another story. They (JSF/F-35 aircraft) could be ‘conventional take-off and landing’ or ‘short take-off and vertical landing’ (STOVL). The engineering complexity involved in the latter may eventually prove to be too much operationally and so the carriers have to be designed with a provision for catapults and arrestor hooks as optional extras. In addition to the uncertainty of the type of aircraft, there still exists the uncertainty of technology transfer. This problem stems from the desire of Ministers to sign up for the JSF programme (and invest \$2 billion for the privilege) without waiting for a satisfactory negotiation of the memoranda of understanding. So much which was important to the UK was left in the Memorandum of Understanding (MOU) to be negotiated later (when inevitably our position would be weaker). There is even still the option to go for a marinised Typhoon (this would result only from a frosty period between the US and the UK) or the French Rafale (which would result only from a particularly cosy period between Britain and France). However, the basic issue is do we require naval carriers as part of our strategic defence or rather as part of an industrial policy to keep the shipyards in key constituencies alive and well? Doing both with the current plan appears to be very expensive and time-consuming. If the Government were to decide that the prime requirement is for ‘Defence of the Realm’ then US-built carriers with leased Boeing F-18E/Fs could be a less expensive and quicker option. (The US Navy itself will be dependent upon the F-18s for the next 30 years) We must remember that in an increasingly unstable, energy-short, pirate infested world we will need a number of naval ships and not just two vast ships with everything on them. As a Russian general once declared: ‘Sometimes quantity has a quality all of its own’.

Destroyers: Because of budget pressures the Type 45 Destroyers have been reduced in number from the original 12 to six. At the same time the ships have seen extraordinary cost inflation. Although very complex and capable, these destroyers are uncompetitive in the defence export market where in reality only one other country could afford them as an import.

The UK defence procurement back-drop *contd.*

Armoured fighting vehicles: The armoured vehicles replacement programme for the Army is fast becoming a national disgrace. So many outsiders including the Wiltshire and Oxfordshire Coroners have spoken critically of the vehicles in which we send our troops to war. Somehow we have managed to turn a fairly straightforward requirement for new vehicles into a 'complex system' – Future Rapid Effects System (FRES) – which has only served to cause delay and incur unwarranted cost. FRES responds to a wish to replace all fighting and support vehicles with a high-tech modular family of vehicles connected with a computer-controlled digital wireless network. On the way the MoD even managed to award £100 million to a company more usually associated with road and railway contracts. So, after many years of expenditure the concept of FRES has been put aside and instead we are going on an ad-hoc buying spree in response to desperate short-term requirements. This approach has created a new challenge – how will this collection of vehicles procured under Urgent Operational Requirements (UORs) be integrated later into the core defence procurement budget?

Joint training: The Technical Training Establishment decision has involved immense complexity and perhaps unaffordable costs even with the PFI arrangement. One of the partners has already walked away.

Pilot training: The Hawk decision for the Advanced Jet Trainer was politically inevitable but instead a 'competition' was entered into because of the last throes of the value-for-money-comes-only-from-competition mantra which has been the MoD's cop-out since the mid 1980s. The original Hawk purchase for the Royal Air Force was very cost effective and was achieved as a sole-source contract. This approach as part of an industrial strategy could have been used to advantage once again. But the skills and experience to do this were abandoned by the MoD some years ago.

Trident replacement: Parliament has decided to replace the Trident nuclear deterrent. At the time of the decision, funding for this system was hardly discussed. Inevitably it will put a further squeeze on the future overall defence budget, notwithstanding the assurances that 'extra' funding will be provided. This ticket to the UN Security Council will appear increasingly unaffordable in the context of the current defence budget and its 'independent nuclear deterrent' claim increasingly threadbare. The basic system technology is American and the British contribution is now American-owned. Sooner or later the funding issues must be addressed.

Summary

What is the common thread which links all of these less than satisfactory episodes? It is the chronic problem of trying to do too much with too little funding. The lack of recognition of this situation played out over many years has led to dysfunctional approaches to contracting which in the end cost even more. A long time observer of the Ministry of Defence recently remarked that the MoD is no longer a rational place and seems to have more in common with the culture of the Middle-East bazaar! The latter is characterised by living for today, constant manoeuvring and unending negotiations.

This situation is reinforced by the political direction given to the high-level decision makers at the MoD to keep everything 'in the air' and not to cancel any major programmes before the next general election. Consistent with this direction, for example, the two carriers have been pushed out by two years, conveniently placing any embarrassment about their possible cancellation beyond the next election.

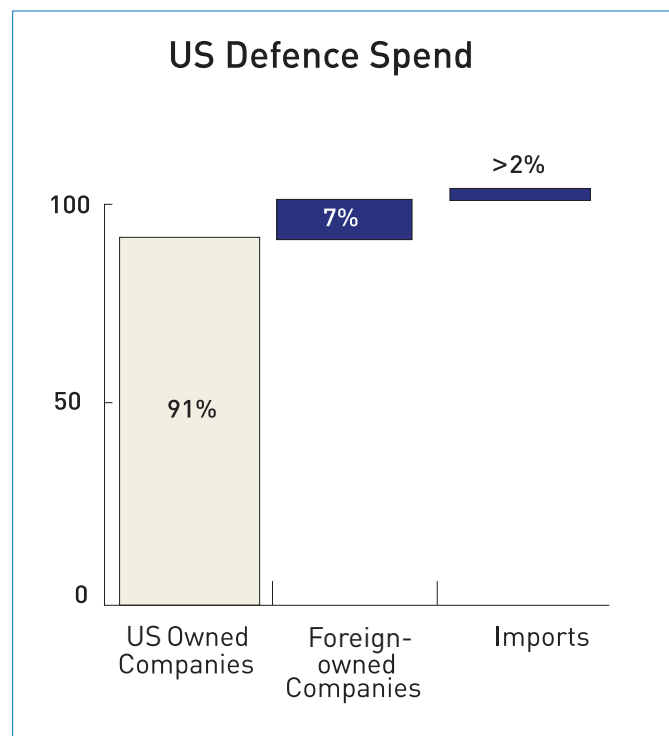
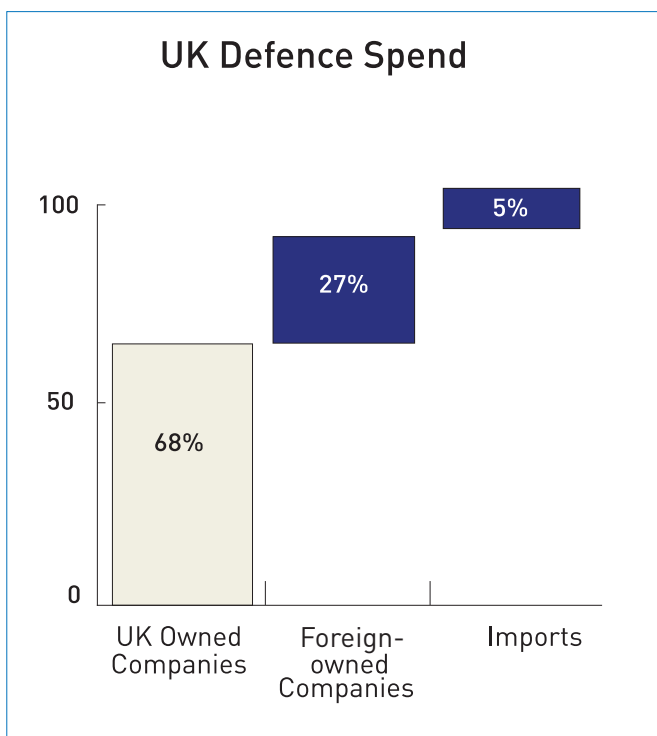
However, none of this should be placed at the feet of the thousands of competent, professional men and women at the MoD who are working hard every day attempting to make sense of it all.

The UK has an open defence market

This chart displays the essential difference in attitude between the UK and the US on defence spending. This pattern is an inevitable consequence of the 20-year-old policy under which ‘value for money comes only from competition’. The UK defence market has been opened up to all comers, sometimes rationally and sometimes viscerally because of the intense personal antagonism between the MoD and certain British-owned defence contractors. The MoD has actively encouraged foreign companies to compete within the UK market and has gone as far as actively participating in the acquisition of British-owned defence companies by foreign contractors. On the other hand, the United States considers its defence industrial base as part of its defence assets and a symbiotic relationship exists between the Pentagon and the US defence industry.

In a defence crisis, only national suppliers are 100% reliable. Imports of vital military equipment are always vulnerable. What happens if the foreign policy of the supplying nation is not congruent with that of the buying nation? Sole-source 155mm ammunition from Belgium was, for example, denied to the UK in the Falklands War.

The UK is losing its ability to make independent decisions in its foreign and defence policies. Already, a Secretary of State for Defence has stated that the UK is unlikely to engage in any major campaign without being alongside the US. This necessitates Britain’s armed forces to be interoperable with those of America. This is becoming increasingly expensive where at the same time technology transfer from the US is becoming increasingly problematical. MoD specialists fear that it is unlikely that significant progress will be made on ITAR (International Trade in Arms Regulations) waivers or defence trade agreements with the new US Administration in the next five years. The current ownership of the UK defence industry is seen as an insurmountable problem in the US where the segmentation is viewed as (i) British-owned UK defence companies, (ii) American-owned UK defence companies and c) foreign-owned UK defence companies. America is justifiably paranoid about defence technology leakage. A very senior Chinese defence procurement official remarked to me that China could obtain defence electronics know-how from France, aero-structure and composite know-how from Italy and US technology through Israel. This remark was in the context of complaints about the UK’s strict adherence to the EU Arms Trade Embargo with China.



Source: Parthenon

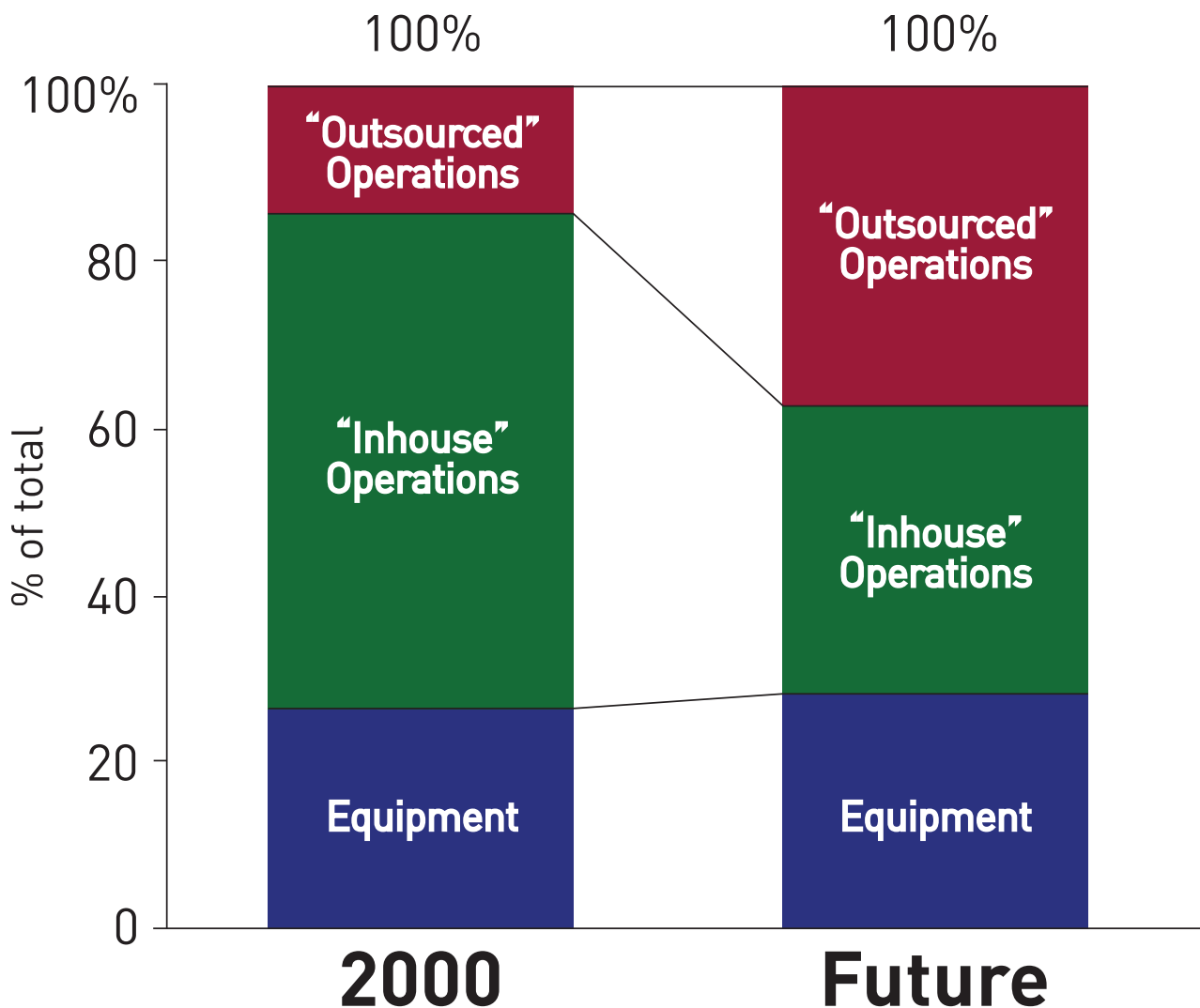
UK defence spending is being 'outsourced'

This chart shows the changing spending pattern in UK defence. The main observation is that traditional in-house operations are being outsourced at an increasing rate. The benefit of this trend is that short-term cost savings can be obtained through outsourcing or 'contractorisation', and officials and politicians take full credit for them. However, this trend can lead to unfortunate unintended consequences.

First of all, the nature and ethos of the armed forces is changing because of the incorporation of so many contractors closer and closer to the front line.

Secondly, the re-competition of follow-on contracts is proving increasingly difficult and expensive.

Thirdly, after the first round when military-trained personnel are taken over by contractors the question of who trains the next generation has to be faced. Because of their 'competitive bids' the contractors are not allowing for the cost of training the next generation and already some tasks are being brought back in-house because of the lack of availability of appropriate contractors.



Source: Parthenon

The European defence procurement back-drop

- **Europe vs. America**

John Dowdy of McKinsey Consultants first made the staggering observation that Europe has twice as many troops but half the defence budget of the US. This is largely because of national conscription which still exists in parts of Europe and the almost derisory budgets for defence in most European countries. The arithmetic implication is that the investment per troop in the United States is four times the average of Europe. This has consequences for relative effectiveness of troops and for their inter-operability. Europe is now spending the lowest percentage of GDP for defence budgets since the 1930s. This level of expenditure in Europe, difficult to explain in today's uncertain world, is easier to understand in the context of pressures from social security, health and education.

- **Procurement policy**

Europe still pursues, somewhat schizophrenically, both European-joint procurements (e.g. Typhoon, A400M) and also US imports (JSF/F-35). This militates against the concept of a European defence stance, even if this were a good idea. History suggests that the European joint procurements with their work-sharing and executive job-rotation incur a penalty of 50% longer schedules and 40% increase of total cost compared with procurement from a single prime contractor. The United States has Boeing, Lockheed Martin, Northrop Grumman, and General Dynamics as large prime systems contractors but in Europe EADS (essentially Franco-German) is emerging as the only European equivalent.

- **European Defence Agency**

The EDA was set up in order to achieve efficiency in defence procurement within Europe. It has so far been very long on process, probably because the objectives set for it by the various nations are not congruent.

- **Defence Industrial Strategy**

It is somewhat novel that the Ministry of Defence set out a Defence Industrial Policy followed by a Defence Industrial Strategy and then a Defence Technology Strategy. This was seen as a great step forward at the time, even though France, Germany and Italy already had *de facto* national strategies, although less explicit.

'Through-life capability management': The Defence Industrial Strategy (DIS) emphasised through-life capability management of defence systems as a way of planning and managing the complete life cycle. The DIS implied that in future, fewer platforms would be procured and instead there would be more upgrades and technology insertion.

Ownership / sovereignty: Certain capabilities – such as production of helicopters and ships – were identified as being core to the UK defence industrial base and were singled out for special consideration. However, ownership of the British defence industry was downplayed and instead consideration was given to on-shore key executive positions, investment and intellectual property. 'Appropriate sovereignty' of know-how was addressed in a minimalist way.

Exports: The importance of defence exports was emphasised but the world leading MoD-centred Defence Export Services Organisation (DESO) was abandoned later, to the puzzlement of customers and the amusement of competitors.

The European defence procurement back-drop *contd.*

Summary: If a strategy is defined as ‘a roadmap with appropriate resources leading to an objective’ then the Defence Industrial Strategy does not conform to the definition and is really another formulation of policy. However, it did address some of the concerns of BAE Systems and was dubbed ‘The Turner Prize’ by *The Economist* after BAE chief executive Mike Turner. The Defence Technology Strategy turned out to be an aspirational list and would have required double the funding that was available. The upshot is that the DIS has encouraged the remaining British-owned defence companies to appreciate their current peak value and many have sold themselves to foreign interests. Mainly because of the lack of underpinning funding of the DIS, the Defence Minister eventually decided to pursue other interests. DIS II has faded away.

• La République

Already France has become the centre for European aerospace (just reflect, the Airbus complex at Toulouse could instead have been at Bristol, given French-style government vision and leadership in London!) and increasingly Paris is becoming the centre for the European defence industry with the combined strength of EADS, Dassault and Thales. In contrast, the UK defence industry, perversely, is descending down the value-added curve and the one-time national champion, BAE Systems is increasingly US-centric. This observation has led EADS to contemplate that it could provide a better future for the military aircraft complex in BAE Systems and this Anglo addition would provide a balance for the Franco-German pressures. A rare bright spot is that Rolls-Royce remains, through an effective blend of strategic management, science and feudalism, a world-class British-owned engineering-based designer, manufacturer and supporter of prime engine systems. Yet, Rolls-Royce military engines only rated a passing reference in the Defence Industrial Strategy, and the latest three decisions on manufacturing sites for Rolls-Royce have resulted in them being sited in the United States, Germany and Singapore. Both the British Government and the trade unions need to reflect upon the implications of these decisions.



UK defence spending from 1931

• 1931	2.1% GDP	'10 year rule'
• 1945	60%	End of World War II
• 1956	9%	Korean War/Suez Crisis
• 1960, 70, 80's	$\pm 4\%$	Cold War
• 1990's	$\pm 3.5\%$	Peace Dividend
• 2000's	$\pm 2.5\%$	More from Less?

US 4.2% plus, China "2.0%", Russia 2.6%, India 2.6%.

France 2.2%, Germany 1.5%, Italy 1.2%, Singapore (up to) 6%

This chart displays the evolution of UK defence spending starting with 2.1% of GDP in 1931. Ironically, it returned to this same percentage 70 years later! Such low defence spending was justified on the 10-year rule which stated that so long as a major conflict could not be envisaged within ten years, then defence spending could be allowed to languish. The mistake contained in this rule is symbolised by the 60%+ of GDP required to be expended by Britain in 1945 during the resulting war. This fell as a percentage but was still at 9% of GDP during the Suez crisis, when even with this level of spending the generals found it difficult to assemble the necessary armed force. During the Cold War spending hovered around 4% of GDP.

During this period, particularly during the 1960s and 70s, Britain lost its collective self-confidence in terms of foreign, defence and industrial policies. The aerospace industry, both civil and defence, effectively was abandoned and Britain relinquished to France and the US its leadership role for ever (TSR2, HS681, P1154, Space Rockets, V1000, VC-10, BAC 2-11, BAC 3-11 – all cancelled.)



UK defence spending from the end of the Cold War



Following the collapse of the Berlin Wall, Western European countries collectively took a 'peace dividend' by cutting their defence budgets. In the UK, first we had 'Options for Change' in the early 1990s, and then 'Front Line First' – both Treasury-driven defence spending cuts masquerading as Defence Reviews. But surely Europe had already enjoyed a peace dividend by way of fifty years of peace? Seeking a second one was, perhaps, intellectually dishonest. However, in 1997 spending still remained in excess of 3% of GDP. This was the backdrop to the 1998 Strategic Defence Review (SDR). Since then, emphasis has been placed on the maintenance of a defence spending level (with the RPI and CPI deflators) instead of maintaining a percentage of GDP which would have been more appropriate. This explains why the Government claims that it has increased defence spending in 'real terms' whereas the armed forces know they have experienced effective cuts. The difference comes from the real rate of inflation in the defence world which overall is between 6 and 8%, as compared with 2-5% in the consumer world (i.e. we can't buy our Typhoons and tanks from China!). Defence spending reached a low point of 2.1% GDP in 2002.

The Strategic Defence Review of 1998 received many plaudits for its conceptual underpinning and participative nature and it received the full support of the Cabinet. However, it was pointed out at the time that there were three serious shortcomings which eventually became public. Firstly, in order to achieve the stamp of approval from the Treasury the funding profile had to fit a line 'suggested' by the Treasury. This meant that intense pressure was put on the armed forces to accept a level of funding one to two billion pounds per annum less than the calculations dictated. Secondly, the opportunity was taken to cut the reserve forces in spite of vocal opposition and thirdly, the treatment of defence technology and the Defence Evaluation and Research Agency (DERA).

- 1990's **(Second) Peace Dividend**
 - 'Options for Change'
 - 'Front Line First'
- 1998 **Strategic Defence Review (SDR)**
 - Underfunded (£1Bn - £2Bn pa); Reduced Reserves; Partial Privatisation of DERA
- 2002 **SDR Update...More from less**
 - Emphasis on Expeditionary Warfare (Carriers), but no more funds

UK defence spending from the end of the Cold War *contd.*

DERA had evolved from the earlier Royal Aircraft Establishment (RAE) and was the world renowned Government-owned Defence Research Laboratory. DERA enjoyed a unique and privileged relationship with the Pentagon and the research laboratories of the United States. In the process of the SDR, the Secretary of State for Defence had assured the National Defence Industries Council that all matters relating to defence technology and DERA would be addressed as a follow-up to the SDR because they were too complex to be taken into account during the SDR. At the eleventh hour, Number 10 and the Treasury decided to partially privatise DERA in order to raise capital to fill a hole in the funding of the Defence Plan.

To appreciate the mishandling of the privatisation of this uniquely and strategically valuable asset and the poor value which the UK taxpayer received, one has only to read the National Audit Office and Select Committee reports.

In 2002 the SDR was updated with emphasis on expeditionary warfare and the role of the Carrier Strike Force. Unfortunately, this more robust stance had to be achieved with no more funds. The underpinning assumption that by going in first we would be able to exit first has so far not worked out either in the Balkans or the Middle East.



UK defence spending today

- 2009
 - Cumulative deficit now £10Bn - £20Bn (Housing, medical, training, pay and equipment)
 - Capital equipment gap: >£15Bn
 - To continue with current Foreign and Defence Policies; to 'repair' the Armed Forces and to fund the equipment plan requires an extra £15Bn per annum...

The implication of the serially underfunded defence budget since the SDR of 1998 is that a cumulative deficit has built up to the tune of some £10-20 billion. This explains the dire state of the forces' housing, medical, training, pay and equipment. Some of this deficit has had to be made up by charities, which have received a positive response from the British public.

The Royal United Services Institute (RUSI) conducted an independent study of the capital equipment plan and concluded that a gap existed in excess of £15 billion. (Since then, the gap has opened up even further.)

So, to continue with the current UK foreign and defence policies requires an increase in the defence budget to cover three aspects. One is to support the armed forces at a level appropriate to their commitments and tempo of operations; the second is to 'repair' the armed forces by making up for the cumulative deficit and the third is to close the capital equipment spending gap both now and in the future.

In practice, this will require a year (one) increase of the defence budget by £5 billion, year (two) by £10 billion and year (three) by £15 billion per annum and then to be held at that level until an appropriate balance has been restored.

It can be pointed out that this is the same overall conclusion, reached entirely independently, by the United Kingdom National Defence Association (UKNDA) in its report of 17 September 2008, 'Overcoming the Defence Crisis', sub-titled 'Defence should be threat-driven, not budget-driven.'



UK defence spending 2009

However, the Prime Minister could decide to continue with the current defence budget and instead lower the foreign policy and defence expectations. Because current defence spending is out of balance with current foreign and defence policy expectations, this will involve massive reductions and cancellations of already announced programmes. It is worth pointing out that ‘repairing’ the armed forces, thereby restoring balance and morale is probably more important than acquiring some of the new capital equipment.



With the possible exception of the Foreign and Commonwealth Office, the Ministry of Defence has been the lowest funding priority of any Government department since 1997. This is inconsistent with the ambitious foreign and defence policies pursued by the Government in the same period.

I am aware that one of the Government’s more influential economic advisors went so far as to say, allegedly, to senior union officials, that ‘defence, aerospace, manufacturing and engineering have no value to us. Only high quality professional services, financial services and the City of London have any real value and they should be supported at all costs. The rest of the country can be turned over to tourism.’

Perhaps this helps to explain why Government support for defence funding has been so lacklustre. However, this sentiment sits uneasily today alongside the enthusiasm for industry expressed by Lord Mandelson, Secretary of State for Business, Enterprise and Regulatory Reform, who said recently: ‘We need more *real* engineering, not just financial engineering.’

- To continue with current Defence Budget will require massive reductions and/or cancellations:
 - Naval Carriers?
 - Naval Destroyers?
 - Joint Training (Technical)?
 - Network-Enabled Capability?
 - Helicopters?
 - Air Transport?
 - Typhoons(third tranche)?
 - Nimrods?
 - JSF/F-35 (STOVL)?
 - Armoured Vehicles (FRES)?
 - Air Tankers?
 - Trident replacement?
- ‘Repairing’ the Armed Forces is more important than some new equipment
- Defence has been and still is the lowest Government Departmental spending priority

Defence capability with current spending

	2009	2014
First Division	- USA - UK	- USA - ?
Second Division	- Fr, Ger, Jap, Russ, China, India - Can, Aus, Swed, Ital, Sing, Spain	- Fr, Russ, China, India, Ger, Jap - UK - Can, Aus, Swed, Ital, Sing, Spain

Defence capability is defined here as the combination of forces, equipment and the willingness to use them.

The implication of maintaining the current level of defence spending over the next five years is portrayed in this chart. If we consider that the prominent countries of the world can be placed in two divisions in terms of their defence capability, then the USA is at the top of the first division. The UK can just cling on to a position at the bottom of the first division because of its combination of capability and commitment to work and, if necessary, fight alongside America.

However, in the next five years at current spending levels, the UK cumulative deficit of spending and the exhausted condition of the troops and their equipment suggests that the nation will fall out of the first division to the middle of the second division. The implications for British foreign policy will be obvious for all to see. In the meantime, Russia, China and India, because of their increased spending levels, will climb up the ranks of the second division.

Let us remember that our relative position is not a matter of machismo, but a measure of the nation's ability to defend its interests. America needs a junior partner to enhance its effectiveness around the world. The lack of a partner, however junior, could encourage the US to revert to isolationism. When Britain is seen to fall out of the first division there will be an unseemly race to fill the vacuum – will it be France or Germany?



Conclusion

The United Kingdom is a major player in world affairs. A Permanent Member of the UN Security Council, and America's key partner in the transatlantic alliance – despite having slumped to seventh place in the league table of global economies – Britain undoubtedly 'punches above its weight'. But, we are also currently 'punching above our budget' – and we can no longer continue to do so.

Our armed forces are severely overstretched and this situation can only worsen if we muddle along as we are, patching up the holes in our defence budget with stop-gap funding ('sticking plaster and scissors, sellotape and string', in the words of Max Hastings, in his January 2009 RUSI Journal article). At this rate we simply cannot continue to fulfil our aspiration to be 'a force for good in the world'.

Our military capabilities are an extension of our foreign policy, but they are also an insurance policy for the nation. Britain is an island nation with sea-borne trade to protect, and with vital interests throughout the world. We are vulnerable. How long could we survive without our imported energy supplies?

The world is an increasingly dangerous place. How can we predict where the next threat may emanate? From a resurgent and bellicose Russia perhaps, or from a fast-industrialising (and militarising) China? What about Iran – seemingly intent on developing a nuclear capability – or turbulent Pakistan? Or any number of failing states. How are we to meet our obligations to the victims of warfare, or of natural disasters, around the globe, and others who look to us for aid? What of our humanitarian 'duty of care'?

At stake is Britain's future: our ability to defend our country and our world-wide interests, our global influence through the UN and international alliances, and, not least, our special relationship with the United States.

The question must be asked: What will we know eighteen months from now that we do not already know regarding the state of Britain's security and defence? The issues are clear now. The decision must be made:

- To continue with **proactive** foreign and defence policies – and fund them
- Or compromise towards **reactive** policies.

Tony Edwards

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About the Author

Tony Edwards is Visiting Professor at The Defence College of Science and Technology (Cranfield University), President of The British Aircraft Preservation Society and Chairman of the Membership Committee of the Worshipful Company of Coachmakers and Coach Harness Makers. He is a Freeman of the City of London.

He is Past President of the Society of British Aerospace Companies (SBAC), Past President of the Royal Aeronautical Society and former Chairman of The Air League. He is a Trustee of the Fly Royal Navy Heritage Trust, the Battle of Britain Memorial Trust, the Aircrew Association Archive Trust and the RAF Museum where he is Chairman of the Fundraising Committee. He is Vice President of the Guild of Aviation Artists.

Tony Edwards is a former Chairman of the Defence and Aerospace Sector Panel of the UK Technology Foresight programme. He was a member of the Aviation Committee for the Department of Trade and Industry and a member of the National Defence Industries Council.

Born in 1944, Tony Edwards was Head of Defence Export Services at the Ministry of Defence, arriving in this post from being Chairman, TI Group Aerospace, and a Main Board Director of TI Group plc. As Chairman of TI Group Aerospace he was responsible for sales of some £600 million. The division held world leadership positions in propellers and aircraft engine components and niche market leadership in hydraulics, actuation and aero-structures.

Mr Edwards became Chief Executive of Dowty Aerospace and a Main Board Director of TI Group in 1992. In 1994 he was additionally appointed Chairman and Chief Executive of Messier-Dowty International, the aircraft landing gear joint venture into which TI Group and Snecma Group merged their respective landing gear businesses. Following the sale of TI Group's interest in Messier-Dowty to Snecma in 1998, Mr Edwards joined the Board of Messier-Dowty International.

From 1962 to 1967, Mr Edwards gained an engineering apprenticeship with Rolls-Royce Aero Engines and read Production Engineering at the University of Birmingham. From 1968 to 1989, he held senior managerial positions with General Electric (USA), Motorola and Canadair Aerospace Group of Bombardier. He joined Lucas Industries plc in 1989 as Managing Director - Aerospace, subsequently becoming Group Managing Director. At various times during these years he lived and worked in the United States, Canada and Denmark. During a 14-year career in General Electric he completed an MBA with distinction at Harvard Business School, subsequently joining the faculty as Lecturer on Production and Operations Management.

His recreations include farming, classic car restoration and historic aircraft preservation.



Supporting our Armed Forces



The United Kingdom National Defence Association (UKNDA) has been created to campaign for sufficient, appropriate and fully funded armed forces that the nation needs to defend effectively its people, their security and vital interests at home and worldwide. The UKNDA contends that the following issues must be addressed:

1. 'Defence' is too low in the nation's list of priorities and therefore the armed forces are under resourced (under funded) for the tasks they are set.
2. This results in inter-service wrangles over an inadequate budget.
3. Over tasking and under resourcing leads to our armed forces being over-stretched and, from time to time, to suffer from equipment shortages and/or failures. These factors can, and do, result all too often in unnecessary casualties.
4. All of the above lead to increasing pressures on that vital element of our armed forces, the serving men and women (and their families) who do the work, face the threats and risk their lives to defend us.

Are you concerned about the effective defence of our country and our people?

**Are you concerned for the safety and welfare of our armed forces?
If the answer is 'Yes', then the UKNDA needs you!**

JOIN THE UKNDA NOW

visit www.uknda.org

(Membership of the UKNDA is open to all - you don't need to have been in the armed forces to join)

Visit our website www.uknda.org for more information, or you can write to:
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