Reviews of Books and Reports

BOOKS

ON ARMOR

by Bruce I. Gudmundsson

Praeger Publishers, USA, 234 pages
ISBN 0-275-95020-4

Gudmundsson takes us on an informed journey through the life of the Armoured Fighting Vehicle. He starts with its somewhat diverse conception, through its baptism of fire in the failures and successes of the closing months of World War One, and the rather gawky adolescence of its teen years in the Twenties and Thirties. He guides us thoroughly through its coming of age in the hands of the German Army and its essential marriage of co-operation to its infantry partner. He even hints at its old age in the 1970s, before taking us briefly through its renewed vigour at the end of the century.

It was Great Britain and France who led the design of the tank through World War One, with the industrial power of the USA only slowly catching up. At the end of that war it was the French, with the largest fleet, who led the way in the development of the tank and armoured cars of the Twenties. They experimented with a surprising variety of weights and differing firepower. But it was the watchful Germans and Soviets who saw the operational level of success that manoeuvring armoured formations could bring in the offensive. France, although overmatching anything the Germans had, even in the Battle of France, really only saw the tank as a static defensive weapon – quickly moving to a specified area, awaiting relief by 'muscle-powered soldiers' and then being transformed into a mobile reserve.

Gudmundsson digs deep into the discreet developments of the Germans' armoured building blocks, such as Guderian's ideal of a totally armoured division. He recognises the adaptability of the German Army that also designed formations for specific campaigns – for example, taking care to use 'muscle power' in the initial invasion of Poland to clear the wooded borders before using armoured formations to exploit the flatter countryside towards Warsaw. He looks at studies of other countries' formations and employment strategies, bringing awareness of the less well-known corners in the history of tank development.

He sees the life of the tank as being one of constant adaptation and experimentation. World War Two led to the need for a Capital Tank or Main Battle Tank (such as the Churchill, and later the Centurion, the T-34, or Sherman) which could fight with the infantry, take on the anti-tank role and be fast enough to exploit success.

Bringing us from the 20th into the 21st Century, Gudmundsson gives a good background to the need for the long-range accuracy and high-kill ratio of what he calls the sniper tanks. These were developed initially by the Israelis, using Centurions from the Golan Heights to shoot on to greater numbers of Syrian forces in the Merkava. In turn, the US and British, who were looking for high-kill ratios to counter overwhelming numbers of Soviet tanks, developed the M1 Abrams and Challengers 1 and 2. He then brings us right up to date with his views on the Stryker Brigades of the US expeditionary forces and the Iraq war of 2003. He argues that the wheel has turned full circle and that we again have a need for diversification of armour's use rather than to drive for a single all-encompassing tank. He sees the smaller light-armoured vehicle fleets having collective protection from self-propelled mortar platforms and mutual fire rather than reliance on greater weights of armour. This in turn allows for greater freedom of speed and range and therefore a more agile fighting force.

It is a factually sound book, which would appeal to those with a strong grounding in armour and an interest in the development of formations. It does not boast particularly good graphics or photographic evidence of the tank's development, using only a handful of US Department of Defense archived photos. It would also have benefited from another proof reading, the numerous errors being distracting and repeatedly drawing a pencil from this frustrated reader's pocket. ■

Peter Cooper

BRITISH WEAPONS ACQUISITION POLICY AND THE FUTILITY OF REFORM

by Warren A. Chin

Ashgate Publishing Limited, 2004, 300 pages
ISBN 0-7546-3121-4

This book about the evolution since World War Two of British policy on defence acquisition has been published at an opportune moment, when there is widespread concern in Government and industry about the efficacy of the Smart Acquisition Initiatives introduced in 1998. Mr Chin shows that defence equipment acquisition in the UK has always suffered chronic problems (many of which also afflict foreign nations beyond the scope of his book) and that there have been numerous earlier efforts to reform acquisition policy and processes. His book (which provides a multitude of key references and an extensive bibliography) should be required reading for any modern policy maker tempted by simplistic panaceas, and for any aspiring student of this unglamorous but vitally important aspect of defence policy.

The book explores why, since 1945, there has been persistent cost escalation and delay in defence projects, why successive reforms have been 'generally ineffective', and the fall and rise of competition and risk contracting. In this period, UK policy has been beset by conflicting arguments: that the provision of defence equipment was too important for national security to be left to the free market, and that cost-effectiveness can only be delivered by a taut commercial approach. The former was accepted wisdom from 1945 to 1979, as UK government took an ever-greater role in regulating and directing British defence companies, up to and including nationalisation. From 1979 to 1997 Thatcherism swung policy to the other extreme, trusting in market forces and eyes-on-hands-off acquisition. Today there is still no consensus, but Smart Acquisition incorporates flavours of both policies.

Mr Chin justifiably deplores the dearth of independent quantitative analyses of the MoD's defence acquisition policy, similar to those that assist other government departments in their formulation of transport, health and social policies, and attributes this lack to the shortage of detailed information which tends to be shrouded by considerations of national security and/or commercial confidentiality. But he does provide a comprehensive review of the few studies which have, over the past half century, attempted to evaluate government policy in this area. Unfortunately, their conclusions are often overshadowed by the myths generated by stakeholders with axes to grind.

The final chapter provides a lucid description of the Smart Acquisition Initiatives; at this stage in the book, readers will have seen in an earlier chapter that the Rayner reforms of 1971 also featured delegation of authority to project managers, a through-life approach and more accountants to control project expenditure – plus ça change! This final chapter, based on the information available up to the start of 2003, concludes sceptically that 'only time will tell', but two years later the omens are more pessimistic.

While the book's presentation of the historical record is both fascinating and valuable, I regret that Mr Chin did not look to the future and consider what MoD acquisition policies would best match the coming decades and their developments in technology, geopolitics and industrial organisation. This is no easy task, but he seems well fitted for it. ■

David Kirkpatrick

ESCAPING THE SUBSIDY TRAP: WHY ARMS EXPORTS ARE BAD FOR BRITAIN

Paul Ingram and Roy Isbister

Oxford Research Group/ Saferworld/Basic, Sep 2004
ISBN 1-904833-05-5, 40 pages, £5

There may be a case to be made on ethical grounds for tightening export controls and thereby reducing arms exports, but the authors do not set out to do this. Instead they attempt to make a case against arms exports on economic grounds, but all they achieve is an argument full of holes, based on assumptions that cannot be justified and figures which are unbelievable or just plain wrong.

They claim that the Government spends nearly a billion pounds a year on subsidising defence exports. More than half of that is ascribed to funding for research and development (R&D) of export equipment, and yet I know from my experience as a Director in MoD that all MoD R&D funding is spent on equipment for the UK Armed Forces. Thus half their 'subsidy' disappears in smoke.

There is more. The authors claim that the buy of BAE Hawk, rather than Italian, aircraft for UK forces is equivalent to a subsidy of £40M per year. But the Italian proposal was a 'paper plane' that may well have proved to cost broadly as much as Hawk. Moreover, most would want to see arguments in a wider context and longer timescale – industrial jobs, follow-on exports, industrial competitiveness, ability to support UK forces when deploying on operations etc. Then, on no coherent basis, the authors extrapolate from this £40M to an annual figure of £200M. Which other projects do they have in mind? Why don't they produce any arguments to back this up? Because they can't? In fact, procurement decisions take account of the full range of factors that affect value for money, both the short-term as well as those that affect future choices

More still. Their arguments on Export Credits are less convincing than the Government's, and use a methodology inappropriate to the nature of ECGD business. The report unconvincingly claims that the premiums ECGD charges the defence industry are too low. The authors refer only very selectively to the Government's July 2004 announcement about the future of ECGD, in which it was made clear that the Government has charged ECGD to continue pricing to break-even. The reader's confidence in the authors' calculations about ECGD are further undermined by their use of apparently contradictory figures: they say that 'a third to one half' of ECGD support is devoted to military exports', but one of their footnotes shows that in 2003/04 only 27% of the total amount at risk was defence related.

Having vastly over-inflated the cost to the taxpayer, the authors then ignore many of the benefits. Some of those in the longer term have already been mentioned, but others should also be included and evaluated, such as the reduction in MoD procurement costs from the spreading of fixed overhead costs. The authors belittle these, but they are real and substantial.

All this punctures the inflated gasbag that they build up. If, on the basis of the above, we remove their figure of £483M for R&D 'misuse', eliminate their equipment procurement, reduce their Export Credit figure to at most £40M, and include the costs of DESO and other official support we get a figure of around £70M. And that assumes that the other figures given are accurate, which is debateable.

Is £70M high enough to distort government spending on defence? I would suggest not. And if we take into account benefits that may accrue in the longer term and in a wider context, including to the costs of defence procurement, we may well find that arms exports are economically advantageous. The argument that exports underpin industrial viability, reduce the cost to the taxpayer of equipment for the UK Armed Forces and sustain jobs in industry are rather more convincing than the arguments under review.

The best place for this booklet is the waste bin. ■

Bill Kincaid

THE RAPID PROCUREMENT OF CAPABILITY TO SUPPORT OPERATIONS

National Audit Office,
HC1161, November 2004

The Stationery Office, London

The varied nature of military operations and the different strategies that may be employed mean that existing capabilities often need to be enhanced to adapt to circumstances, or that new capabilities need to be procured rapidly to fill previously unidentified gaps. Given that the MoD does not have the money to buy all the equipment it may need for all types of operations, it must therefore prioritise its procurement activity and plan on the basis that it will have to fill some capability gaps by Urgent Operational Requirements (UORs). This report examines how successfully the MoD procures UORs, including how well UOR activity is managed.

The MOD procured 312 UORs to support the preparation and warfighting stages of recent operations in Iraq and Afghanistan at a cost of £658M. For the ongoing operation in Iraq, spending on UORs accounted for 35% of expenditure on the preparation and warfighting stages. Most UORs were to enhance fighting equipment capability, with just under a quarter filling unforeseen capability gaps. Thirty per cent of UORs, equivalent to 2–3% of regular procurement spending, were to fill identified capability gaps that the MoD had decided not to fill by regular procurement. The MoD has so far decided to retain almost half of the UORs procured for the operation in Iraq.

That the outcome of the operation in Iraq was successful can be seen as one indicator that the UOR process works. However, the MoD has not comprehensively analysed the outcome of UORs, relying instead on exception reporting. Using the data available on just over half of UORs, the report suggests that two-thirds were delivered, fitted and usable in time for the start of warfighting as required. The vast majority of those deployed and used were assessed as effective or better by users, although in some cases training and support issues meant their capacities could not be fully utilised.

The report shows that many UORs were delivered with impressive speed, reflecting massive commitment by staff in the MoD and in industry. The MoD also showed impressive ingenuity to deliver more customised solutions. In preparing the report, the National Audit Office (NAO) developed a framework based on the practical experiences of staff across the MoD to support further improvements to the management and delivery of UORs. The report draws on the results of this work to make 16 recommendations on how the MoD can build on its approach to UORs to deliver even better outcomes. The report recommends that: stakeholders are better informed about the processes involved in procuring UORs and the roles and responsibilities of different stakeholders; outcome measures and performance indicators, which monitor achievement and drive improvements, are introduced; information on UORs are made more complete, accurate, coherent and accessible; and planning is improved. The report records that the MoD has already implemented some of the recommendations and is constructively looking at the benefits of full implementation of all of them. ■

Tim Banfield

MAJOR PROJECTS REPORT 2004

National Audit Office
HC 1159, 10 November 2004

The Stationery Office, London

The National Audit Office's Major Projects Report (MPR) 2004 seemed to attract rather less comment than last year's, probably because the dust was still settling over reaction to the House of Commons Defence Committee's Report on Defence Procurement,[1] large parts of which were rejected by MoD.

MPR 2004 was rather less obviously contentious, but it contained within it much disquieting data. Its predecessor, MPR 2003, left hanging in the air the question of whether 'Smart' projects[2] were in danger of following the delays and cost overruns of 'legacy' projects. MPR 2004 answers that with an emphatic 'yes'.

But you have to explore the document rather more closely than most people do, for the devil is in the detail, not in the headlines. It is certainly not clear from a study of the Executive Summary volume, and it is necessary to delve into the history in Section 5 of each individual project in the second volume. Even then cost overruns for many projects are difficult to compute as data is missing. Nevertheless, it is possible.

Table 1 shows the trend of cost and time overruns over the last three years, and compares them with 1997, the last year of the 'bad old days'. It should be noted that the costs are on then-year bases, so it is not as bad as it looks. Against that, however, the figures for the 1997 cost increase and delay are for the whole life of projects up to that point, whereas the figures for the other years are the changes only from the last approval. Overall, therefore, the position has worsened considerably.

While MPR 2003 showed that almost all of the delay and cost overrun occurred on 'legacy' projects, MPR 2004 shows that 'Smart' projects are now subject to increasingly poor performance as they

	Total Cost Increase (£M)	Av. Cost Increase /project (£M)	Total Slip to ISD (months)	Av. Slip to ISD (months)
1997	3000	150	925	37
2002	1300	65	173	9
2003	3000	150	334	17
2004	5900	295	362	20

Table 1: Cost and Time Overruns

	ISD at Initial Gate	ISD at Main Gate	ISD Forecast Now	Delay (months)
A400M	Dec 07	Feb 09	Mar 11	+39
BVRAAM	Mar 05	Sep 11	Aug 12	+89
CIP	Mar 04	Mar 04	Jul 04	+4
FJCA	Dec 12	Dec 12	Later	NK
LFATGWS	Apr 05	Nov 05	Nov 05	+8
NLAW	Jun 05	Nov 06	Nov 06	+17
Skynet 5	May 03	Feb 05	Feb 05	+21
Sonar 2087	Jul 03	May 06	May 06	+22
Support Vehs	'Not set'	Sep 05	Feb 08	+29
T45 Destroyer	Dec 02	May 07	May 09	+75
ASTA	Sep 01	Jun 04	May 05	+41
			Average Delay:	+34.5

Table 2: Delays to Post-Main Gate Smart Projects

progress through the procurement cycle. This is not surprising. What is surprising is how much change there has been in one year.

While absolute costs are difficult to derive in some projects, the report shows that, of the five projects that show a significant cost increase, four are 'Smart', with the Future Joint Combat aircraft showing an **in-year** cost increase of 16.9%, A400M 10.9%, Sonar 2087 4.4% and Skynet 3.6%.

Delays to ISD since the start of the 'Smart' projects are easier to pin down, and delays to those that have passed through Main Gate are shown in Table 2.

This shows that the average ISD delay to post-Main Gate 'Smart' projects is similar to the average delay to projects in 1997.

But perhaps the delay to pre-Main Gate 'Smart' projects is even more alarming, as shown at Table 3.

	ISD at Initial Gate	ISD Forecast Now	Delay (months)
BLUH	Sep 06	Oct 08	+25
Falcon	Dec 07	Dec 08	+12
CVF	Aug 12	NK	NK
FIST	Sep 09	Nov 10	+14
FSTA	Jan 09	Feb 13	+49
GBAD	Dec 10	Dec 13	+36
IFPA	Dec 10	Dec 10	0
SCMR	Nov 07	Nov 11	+48
UKMFTS	Apr 08	Apr 08	0
Watchkeeper	Not given	Nov 07	NK
		Average Slip to ISD:	+23

Table 3: Delay in ISDs to Pre-Main Gate Smart Projects

This is not good news as, historically, delays have increased markedly as projects near ISD. And it is quite clear that many projects will be significantly delayed for financial reasons over the next year or two as MoD wrestles with its overheated budget. Expect more bad news next year.

But so what? Surely MoD should be concentrating on reducing the overall cost and the length of the procurement cycle of each project, rather than managing time and cost overruns. Even if we manage to eliminate delays, the cycle will still be far too long. Let us strike at the root of the problem, not treat the symptom. ■

Bill Kincaid

NOTES

1. Reviewed in the Autumn edition of *RUSI Defence Systems*
2. Those which passed through their first major decision point after the launch of the Smart Procurement Initiative in 1998