

ARMS CONVERSION PLANNING - THEORY & PRACTICE

The stimulus for the conversion of military production facilities to peaceful uses can come from changes in the political and financial circumstances surrounding military production at different levels in the economy.

- The conversion process can be initiated by changes in the foreign and military policies of nation states, such as the cessation of war.
- It can arise through the application of limits to the growth of military spending which will tend to affect specific projects and facilities, such as shipbuilding.
- It can be a response within one plant or company to the insecurity resulting from dependence on military contracts and/or the desire to find alternative employment in civilian production.

In each case there are a number of elements which are common to programme for the conversion of military industry to peaceful uses:

Occupational Assessment

An analysis has to take place of the skills and qualifications of the workforce concerned. This is vital because the utmost effort has to be put into the development of alternative employment which entails the use of compatible skills. This is necessary not only to ensure that skills are not being wasted but also to avoid justifiable opposition by the workforce to de-skilling and loss of earnings.

Where comparable employment is not available the development of appropriate courses of retraining will be required.

Generally, for production workers, whether skilled or semi-skilled, transfer to alternative production does not pose a major problem in this regard because of the universal need for machine tool operators, fitters, etc. (Though in overall terms job opportunities have suffered due to the recession and the introduction of New Technologies).

A study of 127 production occupations in military work, carried out in California in 1968, showed that only 6 would require re-training in the transfer to non-military work.

The problems of transferring to non-military work are far greater for the scientists, engineers, technicians and managers. This is mainly due to the dis-similarity between the products and production process in military and civilian work. Also the organisation of defence contracts on a cost-plus basis means that the teams of design engineers and their managers do not have to work under the same constraints of cost-effectiveness operating in the civilian market.

A similar study showed that only 13% of R & D staff employed in military work could be re-employed directly if the industry were

converted to peaceful work.(e.g from military to civilian aerospace)
The remainder could find employment in other sectors of the economy.

Identification of Products & Markets

This is fairly dependent on the scale of the conversion programme undertaken.

If the conversion process is initiated as part of a national plan, that might follow the termination of war, then the products identified would tend to be those most relevant to the sectors prioritised within the economic plan - transport, construction, energy, health, etc.

At any time, however, the state might promote certain industries such as Information Technology, Biotechnology or others which are perceived as beneficial to the public interest.

In both situations the state would play a major role in creating the market through public expenditure.

Where conversion is initiated at the community or factory level the products selected will be based more around the particular skills of the workers and existing production capacity. In the past most conversion projects of this type have been dependent on locating a niche for the products in the 'free ' market.

Planning

This is a central element of the conversion process. It is important to emphasise it also because a major obstacle to conversion is the assumption that conversion will take place through normal market mechanisms ' when the need arises'. However, this is a false assumption because -

- A large part of the production facilities in the military economy can only be used in their present form for military products.
- Military products are not generally transferable to civilian markets.
- The re-location and re-adjustment of manufacturing facilities takes time - from 6 months to 2 years to plan production facilities for new products.
- The length of time necessary to prepare other aspects of conversion, such as re-training, market research, etc.

For the lack of any contingency plans, large numbers of specialised workers are locked into the military economy and this translates into political commitment to high levels of defence spending. But conversion plans have been drawn up and implemented in recent years at local and national levels.

CONVERSION PRACTICE

At National Level

It is worth pointing out that following the end of World War II 8 million workers were redeployed from military production in the space of 18 months.

Since that time the last known major attempt at planning alternatives to military spending was a series of proposals for new capital outlay by the US Government under President Johnson to replace spending on the Vietnam war. There have been no other efforts by Western governments to formulate aggregate economic plans for transferring large capital resources from the military to the civilian economy.

The closest approximation to national conversion planning was the establishment of an Office of Economic Adjustment in the USA. Its main aim is to assist communities to overcome the consequences of military cutbacks. It has not been granted enough finance to fund conversion directly and is mainly concerned with the provision of advice and expertise. Despite this limitation the OEA claims that between 1961 and 1977, 68000 workers were hit by some sort of military cutback. With federal adjustment assistance, conversion & diversification plans, a total of 78,000 new jobs were created. Although it is difficult to know how much of this was exactly 'conversion' of facilities to civilian uses and how much was due to the attraction of new enterprises to an area.

The limits of the OEA have led to a number of legislative proposals being put before Congress which, if passed, would put a great deal of financial weight behind Conversion planning.

Community Conversion Planning

Concerns those communities which, through the siting of a military base or through the concentration of military contractors, are particularly dependent on military spending and are vulnerable to cuts in defence expenditure.

In the United Kingdom there are only a couple of examples of conversion planning at this level. A study was carried out in Preston, Lancashire on the development of alternative employment for those workers in the British Aircraft Corporation working on the MRCA Tornado aircraft, and those in the Royal Ordnance Factory producing Tank engines. A preliminary study has also been made of the impact of the closure, or run down of the Clyde Submarine Base.

In the USA there are large numbers of documented cases of communities, from Massachusetts to California which have created an equal or greater level of alternative employment following the closure of military facilities.

At the same time in many areas, such as the Pacific North West of the USA it has proved very difficult to find a substitute for military work given the general industrial decline in the community. Here it has proved necessary to set up local organisations representing all sections

of the community which can tackle arms conversion as part and parcel of the need to make use of all 'redundant' industrial capacity. An example of this is the Mid-Peninsula Conversion Project set up to promote arms conversion in Santa Clara County, California which is an area dominated by the military. It also lies within 'Silicon Valley', centre of the microelectronics industry and the people in the Project realised that they could not separate the issues of defence dependency and the control of technological development as a whole.

As part of their programme they established the Citizen's Technology & Employment Programme which is concerned with the effects of New Technologies on employment and in creating jobs through the application of Solar Technology to Energy Conservation in the locality.

Factory/Industry Based Conversion

Many proposals for Arms Conversion have come from groups outside the industry with which they are concerned. Unless the proposals contain some guarantees of providing comparable alternative employment they tend to be regarded with suspicion by the defence workers. In the past this has meant that many conversion plans have been no more than paper exercises.

Conversion initiatives which have been started by the workers themselves start from a very much sounder base, as was demonstrated by the Alternative Corporate Plan developed by the workers in Lucas Aerospace.

This Plan was instigated in response to the Company policy of rationalisation & redundancy and was an attempt to overcome the limitations of more traditional trade union activities, such as occupations, when workers are faced with plant closure. By presenting a coherent set of alternatives to military production it also pre-empted demands to maintain employment through increased defence spending.

The Plan was drawn up by the Combine Shop Stewards Committee, which represented workers from all occupations and sites in the company, from the information they obtained from the workforce by means of a questionnaire. The questionnaire was sent to all the workers asking them to propose products on which they could work, using their skills and existing plant, and which would meet social needs.

The Plan contained a list of 150 'socially useful products' from Braking Systems to Oceanics and were divided between those that were commercial viable and those that were of general social benefit. The Plan was presented to the Company as the basis for further negotiations. The Company flatly rejected it saying that its existing product range was the best guarantee of employment and they had the sole prerogative over product choice anyway.

Since then the Combine have been unable to force the Company to implement the Plan despite support from the Labour government and the Confederation of Shipbuilding & Engineering Unions, though this support turned into obstruction as the Combine began to challenge the power of the established bureaucracies.

The development of the Plan has however prevented the Company

from carrying out their plans for rationalisation over a 5 year period and has demonstrated the ability of shop-floor workers to decide what products they should make, how they should be made and in whose interests they should be made.

The Alternative Corporate Plan has also been picked up on by workers facing similar problems in other industries.

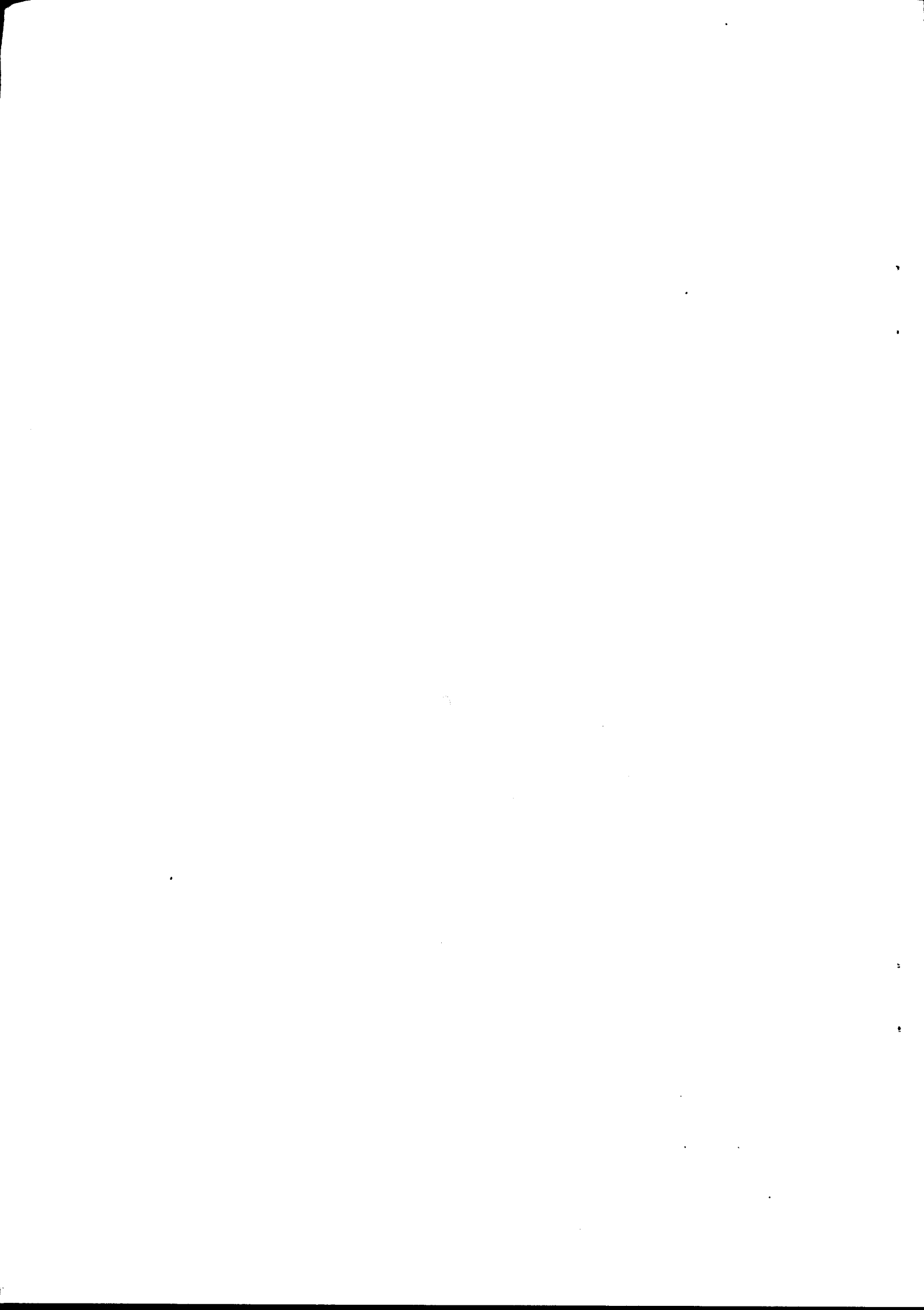
In Vickers, another defence contractor, shop stewards drew up a plan containing a series of alternative product proposals which would have provided security of employment for those workers whose jobs were threatened by the cancellation of contracts for the Chieftain Tank and the Anti-submarine Warfare Cruiser.

In the civilian industrial sector, workers in C.A.Parsons, Rolls Royce, the motor industry and the machine tool industry have all produced 'workers' plans' for their companies outlining how useful employment could be provided for workers threatened with redundancy.

Yet in each of these cases the workers have only had minimal success in getting their plans for conversion implemented. This is due to the enormous obstacles that confront Conversion Plans.

BARRIERS TO CONVERSION

- Technical problems of conversion arising from the specialised nature of the products, production processes and skills connected with arms manufacture, and its economic inefficiency.
- The mutually beneficial and dependent relationship between the state and the private arms manufacture. The companies gain highly profitable, cost-plus contracts, while the state has a range of specialised industrial facilities tied to its needs but without day-to-day managerial responsibility.
- The lack of forward planning for Arms Conversion at national, community or company level. This should involve:
 - (i) Legislation on finance for Conversion, clauses on conversion in defence contracts, etc.
 - (ii) Mechanisms for creating demand for socially useful products via public expenditure.
 - (iii) Establishment of national/ regional centres to give assistance to conversion projects.
- Suspicion amongst defence workers that conversion will not provide a viable alternative to their present employment.
- Failure to make politicians fully accountable so that policies on the reduction of defence spending, disarmament and conversion do not get implemented.
- The pervasive Cold War ideology which plays up the Soviet threat; the need for an independent deterrent & an autonomous arms industry; the economic benefits of defence spending, etc, etc.
- The tendency for Conversion initiatives to be isolated in one company or community where the workforce lack the power to enforce conversion by themselves.



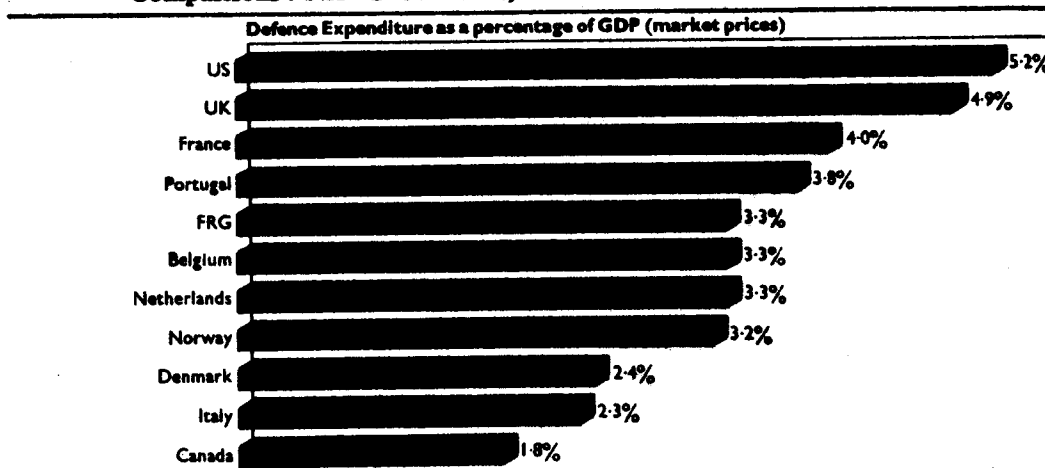
DEFENCE EXPENDITURE - WHO PAYS, WHO BENEFITS

The True Cost

The Government has recently published its estimate for the Defence Budget for the year 1981/2. This amounts to £12,274 million which is the same as for 1980/81, allowing for inflation. However, the 80/81 budget was overspent by £260m according to the Government's own admission, so the estimate for this year actually represents an increase of 5% over 1979/80.

Britain is already committed to a 3% increase in its military expenditure as demanded by NATO even though we spend a higher proportion of our Gross Domestic Product on Defence than any other of the European NATO members.

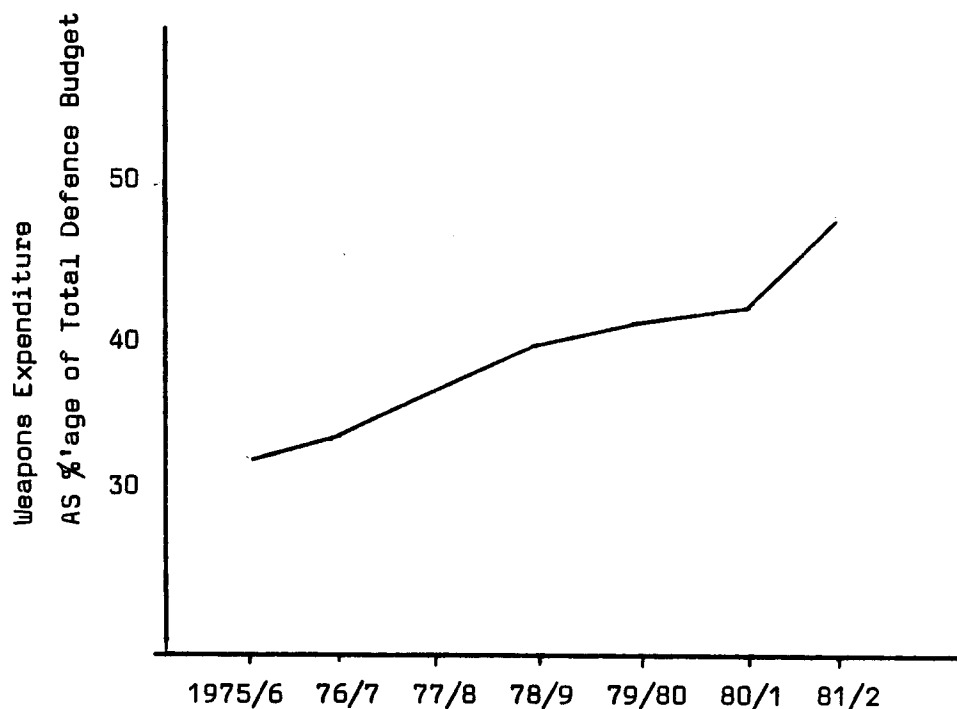
Comparisons : NATO Countries, 1979



Despite the Defence Secretary's commitment to keep expenditure within the cash limits laid down by the Treasury, and thus be seen to accept the monetarist medicine meted out to the rest of the public sector, actual expenditure is likely to be considerably higher than estimated. An independent report suggests that a number of factors including the strength of sterling kept overspending last year down to £260m but the underlying rate of spending is now 10% or so above the original limits and unless this is rectified it will lead to a serious breach of the cash limits by up to £1 billion.

The Source of the Problem

The rising cost of Defence is partly due to the inflationary pressures that affect the economy as a whole but the main cause is the escalating cost of military equipment. This is now rising at twice the rate of inflation, with each new generation of weapons costing many times more than its predecessor. Thus, in real terms, the Chieftain tanks are twice the cost of Centurions, the Jaguar ground attack three times the cost of the Hunter, and the cost of the latest Type 22 frigate is eight times the cost of the Leander class.



These increases in cost are a direct function of the increasing sophistication and complexity of the equipment. Each generation of weapons is designed not so much as to improve its speed or explosive power as to improve its ability to locate its target under all types of hostile conditions and in the face of elaborate countermeasures. This has led to greater and greater reliance on electronics for communications, navigation, target location, guidance, etc, etc.

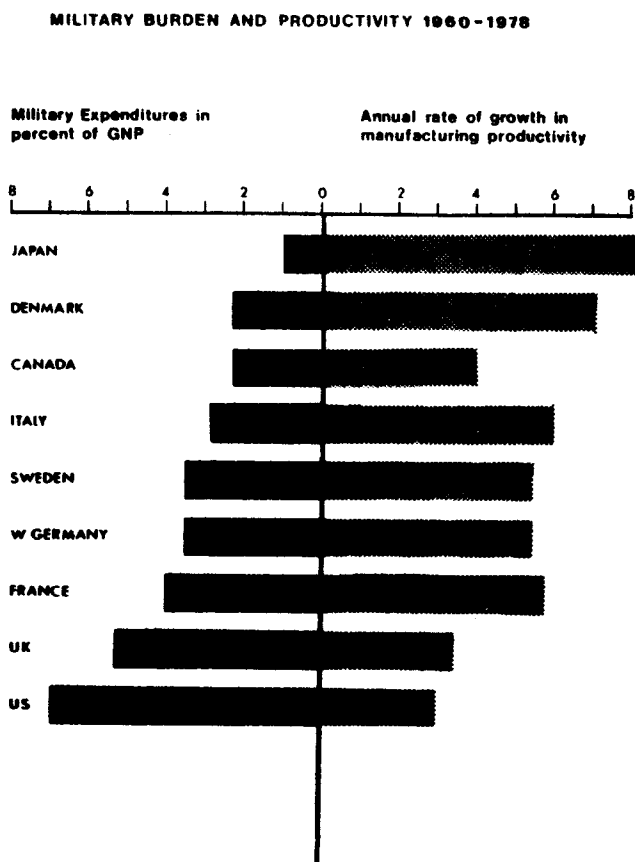
The unit costs for the production of weapons systems, such as the Tornado, tend to be very high because of this complexity and the fact that all the overheads have to be borne over a relatively small number of units. Most defence equipment cannot be sold in the civilian market. Moreover, production costs do not include the cost of maintenance, support & training which rise even faster than production costs owing to the unreliability of highly sophisticated equipment. 'Full life-time costs' give a better picture.

The rising cost of defence is the result of an 'Arms Race' which has focussed more and more on technical development as agreements have been reached on numbers. Such a race tends to become self-perpetuating because in peace-time the assessment of threat arising from technical changes is highly subjective. Technological potential becomes necessity, often without really bringing a major improvement. The swing-wing concept was used in the Tornado to give it a multi-role capability but the outcome, in the words of one RAF Officer, was a plane that was 'a jack of all trades and master of none'.

Competition between manufacturers is also the motor of technical change in the civilian sector but there the employment of new technologies is moderated by the ability of the market to bear the consequent price increases. In the defence sector where there is one main purchaser, the MoD, with whom many weapons manufacturers have contracts arranged on a 'cost-plus' basis, that moderating influence is severely diminished.

The Economic Effects

In defending high levels of defence expenditure Government Ministers and others have argued that it acts as a stimulus to the economy, providing jobs, promoting technological change in industry and producing export earnings. However, most of the evidence suggests that the reverse is true - that defence spending is a burden on the economy and the people. This is most clearly illustrated by negative correlation between countries' economic performances and their defence budgets. Of the major industrialised countries those with the best economic record have tended to be those with relatively low levels of defence spending.



This is the result of the competition between military spending and economic investment. In these cases a 1% increase in military spending has been associated with a 1% decrease in investment and a consequently lower rate of economic growth.

This effect is exacerbated where the economy is oriented towards exports particularly as the base for economic growth, as exemplified by the present government's policies. Military expenditure makes

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large demands on the engineering and transport sector which manufacture the goods most in demand in international trade, thus reducing the availability of these goods for export. This dynamic sector of the economy is therefore handicapped slowing down the growth of the economy overall.

If the export of military goods could replace the export of civilian goods that are lost in this way then the economy would not suffer from this handicap. However, British industry has not proved as efficient in the production and sale of military goods as it has civilian goods and despite the present Government's emphasis on defence exports there are major limitations on the potential contribution that they could make to the economy. (see below)

Inflation

Apart from diverting resources away from more productive areas of the economy there is evidence that high levels of defence spending are inflationary. It puts money into the hands of workers without expanding the supply of goods that they can buy. Neither the workers in Lucas Aerospace nor other consumers can buy the Stingray torpedoes that they work on, or ASW Cruisers, or Chieftain tanks or Harrier aircraft, etc,etc. They therefore have to spend the money on a more limited number of consumer goods causing the price of those goods to rise. This is the classic inflationary position of 'too much money chasing too few goods'.

This inflationary tendency is exacerbated by the rise in the cost of military equipment explained earlier.

Technology

For the technologies developed in the military sector to be of benefit to the economy as a whole, they must have some application in the industrial processes and markets of the civilian sector. But the trend towards more highly sophisticated military equipment tends to reduce the potential for this since these products and techniques have a decreasing utility in the civilian sector. The type of technologies employed in the MRCA Tornado or the Type 22 Frigate are of little relevance in civilian aircraft or merchant shipping. This is known as a lack of 'complementarity'.

In some areas, for example helicopters, where there has been considerable complementarity in the past between military and civil equipment, the specifications for the two types of equipment are expected to diverge from around 90% to less than 50% complementarity.

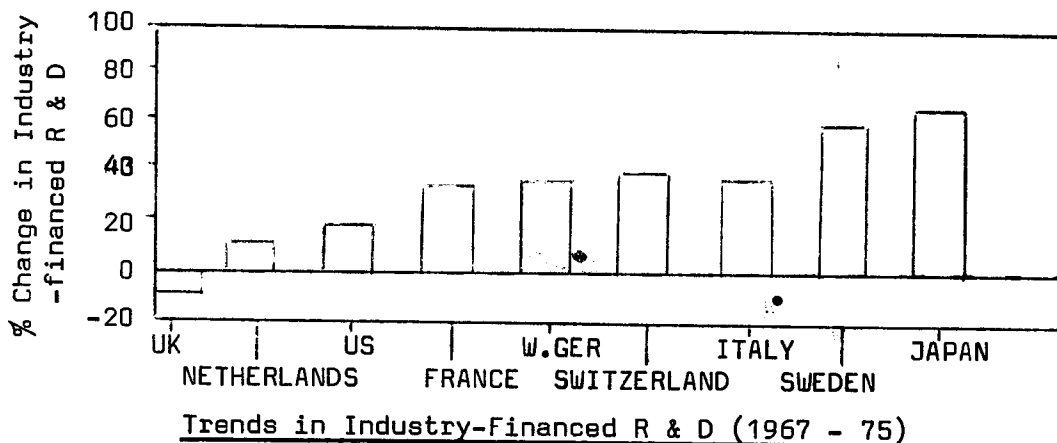
Thus military industrial capacity becomes more and more specialised and the development and production of weapons systems entails the maintenance of integrated teams of scientists, designers, skilled assembly workers and dedicated equipment. They cannot be put onto civilian products when there is a dearth of military contracts.

This has been a major problem in the shipbuilding industry where the shipyards in Vickers and Vosper's were dependent on the Royal Navy to provide them with a regular rolling programme of orders. That dependency was accentuated by the decline in merchant shipping and the Royal Navy's insistence on demanding 'excessively' sophisticated and expensive warships that were not in demand by other Navies.

The problem came to a head in the Spring of 1981 when the Government, looking for a way to restrain defence spending, opted for Trident submarines and a reduced role for surface warships. 30,000 workers employed on naval shipbuilding were confronted with the cessation of the rolling programme of orders provided by the Government without an alternative source of employment.

The lack of complementarity between military and civilian equipment means that the huge amounts of money sunk in the development of new weapons systems are lost to Research and Development in civilian industry.

Over 50% of Government financed R & D is spent on Defence projects while only 48% is spent in the civilian sector, compared with 70% in France, 88% in West Germany, and 95% in Japan. Overall, in the UK investment in industrial R & D has shown a negative trend in real terms compared with the major OECD countries:



Since many of the industries that are expected to provide the basis for economic growth in the next 20 years, such as Telecommunications, Robotics, and Biotechnology, require extensive inputs of R & D prior to production, this concentration on defence will have a detrimental effect on industrial performance in the future.

Clearly some civilian applications - 'spin-offs' - from military research, such as high temperature alloys, will continue to occur but they are not a substitute for the developments that could take place if the research was directed towards civilian uses in the first case. It has also been suggested that non-military areas of science and technology have been shaped by the sorts of skill and innovation created for the military sector, the development of nuclear power rather than alternative energy sources, is an example.

THE GOVERNMENT RESPONSE TO ESCALATING DEFENCE COSTS

The main consequence of the pressure on the Defence budget, resulting from the rising cost of military equipment, has been a trend in defence planning to accept a loss of quantity in return for greater quality. But as the numbers of aircraft, for example, are reduced to accommodate higher development costs so economies of scale are limited and unit costs go up even further. With fewer units available, each unit has been expected to do more and more, thus demanding more complexity and sophistication, and consequently higher development and full life-time costs.

In order to escape this vicious circle a reduction in unit costs can be obtained by securing the benefit of longer production runs, which basically involves the location of markets extending beyond a single country. This can be achieved in a number of ways:

Importing

Buying weapons 'off-the-shelf', as this Government has decided to do with the Trident missiles, can save one country the costs of extended development programmes but it has an adverse effect on that country's Balance of Payments and on employment in its domestic arms industry.

In Britain over the last decade imports have never accounted for more than about 14% of the total equipment budget. This is partly because of the economic factors mentioned but mainly because successive Governments have not wished to become dependent on foreign suppliers of arms, aiming instead to maintain an autonomous defence industry wherever possible.

Co-operative Projects

International collaboration over the development and production of weapons systems is the preferred approach to cost-cutting, especially in the aerospace sector. The British-German-Italian MRCA Tornado is a recent example. This can produce savings for the individual countries involved, particularly at the development stage.

However, collaboration also produces a number of inefficiencies that arise from the practical problems of co-ordinating production in different countries, the range of requirements laid down by the various armed forces, the desire to protect 'one's own' industry, etc.

So it is rare that the potential savings from international co-operation are fully realised - as one French General remarked, "you divide the cost by two and then multiply it by three to take account of the difficulties of building it in two countries." The cost of the MRCA Tornado now stands at 10 times the original estimate, though it is difficult to assess how much of this increase is attributable to problems of co-operation.

Exporting

The promotion of exports, allowing for longer production runs,

has been actively pursued by this Conservative Government, not least because it is an option that fits in with their general economic plans to make British industry more competitive in international markets. It is very doubtful whether this policy of boosting overseas sales is going to produce significant reductions in the overall cost of equipment to the MoD. The purpose of exporting arms is to spread development costs over a larger number of units but in practice British arms exports are dominated by areas not absorbing great amounts of R & D funds.

Over the last 5 years military aircraft have provided only 16.8% of export earnings but have taken over 55% of Government R & D funds. On the other hand ground equipment constituted over 55% of defence sales between 1975 and 1979, yet absorbed under 12% of R & D spending.

Even the MoD's exports do not often yield a profit of any kind nor contribute to fixed overhead costs. For example, in 1975/6 of £206m of land systems sales only £58m covered costs and a mere £19m yielded a profit.

The potential for increased exports to offset equipment costs has been reduced as the world recession has made competition keener. Traditionally, arms exporting countries have always had their own customer nations but some countries have begun 'poaching' customers with the result that there has been a fall in the export content of defence sales from 43% in 1977 to 33% last year.

So although a major effort to boost defence exports may help to offset some of the expenditure on military equipment its contribution is minimal when compared to the enormous economic costs of maintaining a high level of military spending.

Moreover, in promoting exports the Government does not explain how the way in which the MoD buys weapons ensures that the benefits of increased sales accrue to the arms manufacturers while the costs fall to the taxpayer.

THE WEAPONS MARKET ?

We are led to believe that the purchase of arms by the Government takes place in much the same manner as other trade in the market with the MoD choosing between different weapons on offer, or between different tenders for the contracts it puts out. Thus the taxpayer gets value for money through the competition between suppliers.

In fact the exchanges between the Government and the arms suppliers take place on a totally different basis to those in the market for civilian goods.

In theory, in the civilian market it is the seller who will research, develop, manufacture and decide on the price of a product. The seller will select a price that gives a certain mark-up on costs but will also be influenced by the level of demand from buyers and the competition from other sellers. In theory, this ensures that any goods are reasonably priced and efficiency is optimised.

In the arms 'market' it is the government which specifies the type of product it requires initially and will select a supplier from an approved list. Usually, it is the Government that will bear most of the development costs and may provide equipment and facilities for the use of the manufacturer. The price of the weapon will then be determined on the reimbursement of costs plus a margin of profit.

Since over 80% of defence contracts are awarded on a non-competing basis there is virtually no market or other external regulation of prices beyond the Government's willingness to pay. In this situation cost-overruns are the norm rather than the exception because the Government cannot easily back down once committed to a particular weapons system due to the delays and costs involved in switching to another system. With collaborative projects the manufacturers are in an even more powerful position because individual governments are bound by agreements from which they cannot withdraw. The West German Government made a great fuss over the enormous cost increase of the Tornado but could do little about it.

So, the UK budget for military equipment of £5.3 billion is up for the taking by the major arms manufacturers who have a vested interest in increasing the cost of a project as their profits are guaranteed.

Major arms companies

Company	Latest year	Performance				Employment			
		Sales £m	% change on previous year	Pre-tax profit £m	% change on previous year	Dividend £m	Total UK employees	Employees' average weekly pay ¹ £	Top director's weekly pay £
GENERAL ELECTRIC CO	Mar 80	3,005.8	+20.2	415.7	+9.9	45.3	153,000	90	1,442
THORN-EMI	Mar 80	1,620.9	+34.2	125.5	+6.3	25.5	101,040	80	1,436
LUCAS	July 80	1,195.9	+11.6	39.1	-44.8	10.5	67,805	96	1,105
BRITISH AEROSPACE	Dec 79	1,027.4	+14.9	44.4	-26.5	2.2	70,050	97	675
PLESSEY	Mar 80	751.0	+15.8	60.1	+29.9	16.5	38,006	96	2,576
RANK ORGANISATION	Oct 80	596.7	+10.9	111.2	-15.3	22.4	29,883	73	1,173
VICKERS	Dec 79	389.8	-0.4	7.3	-37.7	4.6	16,670	86	901
SMITHS INDUSTRIES	Aug 80	319.8	+12.3	26.1	+4.0	5.0	17,373	89	1,050
RACAL	Mar 80	263.7	+16.3	63.6	+3.2	9.5	6,724	106	1,992
FERRANTI	Mar 80	214.6	+11.7	11.2	+12.5	14.5	16,545	91	750

¹average for all employees, including management

If these companies then sell numbers of the weapons developed at the taxpayer's expense to buyers overseas the taxpayer receives little of the proceeds. The Government levy on commercial sales of equipment, wholly or substantially designed and developed at the Government's expense, has been bringing in only some £9 million per annum, which is a pitiful return on an annual R & D expenditure of over £1.5 billion.

Thus defence expenditure really is a gravy train for the arms manufacturers who make every effort to get defence contracts. Marconi Space & Defence Systems (part of GEC) called in special consultants to advise them on their strategy to obtain a £920 million contract for a new torpedo.

UK based contractors paid £5 million or more by MoD	
Over £100 million	Philips Electrical & Associated Industries
British Aerospace Aircraft Group	Pilkington Bros
British Aerospace Dynamics Group	Short Bros
British Shipbuilders	Smiths Industries
General Electric Co (UK)	UK Atomic Energy Authority
Rolls Royce	Vickers
Royal Ordnance Factories	
£50-£100 million	£5-£10 million
British Leyland	British & Commonwealth Shipping
Ferranti	Chloride Group
Plessey	Clarke Chapman
Westland Aircraft	Courtaulds
£25-£50 million	Decca
Dowty Group	Dunlop Holdings
EMI	Fodens
Hunting Associated Industries	Gresham Lion
Lucas Industries	Guest Keen & Nettlefolds
Racal Electronics	Hawker Siddeley Group
Sperry Rand	Imperial Group
£10-£25 million	Mullard
British Electric Traction	Rank Organisation
Marshall of Cambridge (Engineering)	Rolls Royce Motor Holdings
	Standard Telephones & Cables
	The Singer Co (UK)
	Thorn Electric Industries
	Vauxhall Motors
	Weir Group

Apart from the lucrative cost-plus procurement arrangement the MoD subsidises the arms manufacturers in another way. In 1966 the MoD set up the Defence Sales Organisation (now International Military Services) to promote the sales of arms abroad and it now also has a subsidiary called Millbank Technical Services which acts as an agent for overseas governments interested in purchasing military hardware and services. These organisations act on behalf of the public and private arms manufacturers in the weapons trade and the repeated allegations of 'bribery' suggest that they do some of the companies' dirty work as well.

... AND JOB SECURITY ?

Clearly the arms companies do very well out of defence contracts but the benefits do not necessarily accrue to their employees who manufacture them. Their future employment is under threat on two fronts.

Firstly, arms manufacture is becoming increasingly capital intensive which means that labour is displaced. A study by the

American Machinists Union has shown that as the defence budgets increase the number of machinist's jobs in military industry decline. This effect is exacerbated by the escalating cost of arms which reduces the number of projects that can be financed from the defence budget. The Conservative Government's decision to reduce the surface fleet will make 70,000 workers redundant.

Secondly, international arms deals tend to be a very unreliable source of work. Historically this has always been the case but competition has become very much more intense recently due to the recession and the entry of a number of 'less developed countries' into the league of arms producers.

So, even though some workers can heave a sigh of relief when their company gets a defence contract or their dockyard picks up the work that was being carried out at Chatham, that relief may be shortlived. In the future there will be fewer and fewer jobs in arms industries, even under a Conservative government that has no commitment to real cuts in the defence budget or disarmament.

There would be more jobs and security for skilled and un-skilled workers alike if the money spent on defence was spent instead on civilian projects. This transfer of funds would also be used to meet the vast range of unmet social needs that are visible everywhere.

However to achieve this is a major task because it challenges the foundation of a military- industrial complex in which the roles of company directors and government officials cannot be separated out and in which 'the national interest' has come to be identified with the needs of the arms manufacturers.

DEFENCE SPENDING IS A DIMINISHING SOURCE OF EMPLOYMENT, IT IS A BURDEN ON THE ECONOMY AND IT UNDERMINES THE STANDARD OF LIVING OF WORKERS IN OTHER SECTORS. REAL ALTERNATIVES NEED TO BE DEVELOPED BASED ON OUR NEEDS AND OUR REPRESENTATIVES SHOULD BE PRESSED TO IMPLEMENT THEM DESPITE THE OPPOSITION FROM THOSE WHO PROFIT FROM THE ARMS TRADE.
