INDUSTRY COMMISSION

DEFENCE PROCUREMENT

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INDUSTRY COMMISSION

30 August 1994

The Honourable George Gear MP
Assistant Treasurer
Parliament House
CANBERRA ACT 2600

Dear Assistance Treasurer

In accordance with Section 7 of the *Industry Commission Act 1989,* we have pleasure in submitting to you the report on Defence Procurement.

Yours sincerely

Keith J Horton-Stephens	Roger G Mauldon	John M Moten
Presiding Commissioner	Commissioner	Associate Commissioner

COMMISSIONER

Benjamin Offices, Chan Street,
Belconnen ACT Australia

Acknowledgment

The Commissioners record their application of the application and commitment of the staff who assisted in the preparation of this report.

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ABBREVIATIONS

AAAI	Association of Australian Aerospace Industries
ABS	Australian Bureau of Statistics
ACM	Australian Chamber of Manufactures
ACS	Australian Construction Services
ADF	Australian Defence Force
ADI	Australian Defence Industries Ltd
AEEMA	Australian Electrical and Electronic Manufacturers' Association
AIIA	Australian Information Industry Association
AII	Australian Industry Involvement
A&L	Acquisition and Logistics Organisation
ANZ	Australian and New Zealand
ASC	Australian Submarine Corporation Pty Limited
ASTA	AeroSpace Technologies of Australia Ltd
AWADI	AWA Defence Industries Pty Ltd
BAeA	British Aerospace Australia
CEPMAN	Capital Equipment Procurement Manual
CIDA	Construction Industry Development Authority
CSP	Commercial Support Program
CUC	Common Use Contract
DAS	Department of Administrative Services
DEP	Defence Export Program
DESO	Defence Export Services Organisation (United Kingdom)
DID	Defence Industry Development Program
DRSC	Defence Required Support Capability
DSTO	Defence Science and Technology Organisation
FMS	Foreign Military Sales
GDP	Gross Domestic Product
HdH	Hawker De Havilland Ltd
IHO	In-house option
ISO	Industrial Supplies Office
IT	Information technology
ITR	Invitation to Register Interest
JORN	Jindalee Over-the-Horizon Radar Network
MOU	Memorandum of Understanding
R&D	Research and development
RFP	Request for proposal
RFT	Request for tender

ROI	Registration of interest
SER	Source Evaluation Report
SOR	Statement of requirements
TEB	Tender Evaluation Board

GLOSSARY

Australian Industry Involvement (AII) program	In regard to a particular acquisition, an AII program refers to activities to be undertaken by Australian industry established under a contract to supply goods and services to Defence. AII is sometimes referred to as a program in a generic sense.
Commercial Support Program (CSP)	Defence's program for testing non-core activities by opening them up to tender.
Core activities	Activities currently regarded as core by Defence include combat and combat-related activities within operational areas, and Department of State functions that relate to defence powers in the Constitution or to specific legislative requirements.
Defence Export Program (DEP)	A program established by Defence in 1992 to help industry to export through marketing and promotion assistance. Other export help is available through the Australian Defence Force (ADF) and through Austrade.
Defence Industry Development (DID) Program	A program intended to develop industry capabilities to meet long-term Defence requirements.
Defence procurement	The acquisition of goods and services by Defence from industry or commerce.
Defence Required Support Capability (DRSC) Program	A program intended to maintain capabilities in Australia for which there are little or no commercial markets and little utilisation in peacetime.
In-house option (IHO)	A bid from within Defence to provide goods or services under the CSP.
Invitation to Register Interest (ITR)	The initial document in a tendering process. The ITR canvasses the ability and interest of companies to undertake and complete the project. It can be used to assist in shortlisting contenders.

Local Content	The term used in the current AII program to refer to Australian and New Zealand content.
Multi-stage tendering	A tendering process which includes at least two of the ITR, RFP and RFT stages.
Non-core activities	Activities under the CSP which are not considered to be core.
Offsets	In the defence context, offsets are activities of defence and technological significance required to be directed to Australian industry by an overseas contractor or subcontractor.
ORANI	A general equilibrium model of the Australian economy used to explore the economy-wide and industry effects of changes in economic policy.
Request for Proposal (RFP)	A document seeking information from industry prior to developing formal tender documentation. The RFP is not always used, but is used when 'near-tender-quality' information is required, and Defence has been unable to define the requirement, specifications or other equipment options. It can also be used to estimate costs, and to assist in shortlisting contenders.
Request for Tender (RFT)	A formal statement of a Defence requirement, used to solicit offers from suppliers for the purpose of placing a contract to satisfy that requirement.
Strategic requirements	Requirements which directly influence the ability of Defence to fulfil its mission 'to promote the security of Australia, and to protect its people and interests'.
Transition costs	Costs which have to be met by Defence under the CSP when an in-house option or commercial option is accepted. Such costs can include redundancy payments, and disposals of surplus machinery.

TERMS OF REFERENCE

I, GEORGE GEAR, Assistant Treasurer, in pursuance of Section 7 of the Industry Commission Act 1989 hereby:

1. refer Australia's defence procurement for inquiry and report within twelve months of the date of receipt of this reference;

2. specify that the Commission report on:

   (a) the effectiveness and efficiency of Australia's current defence procurement arrangements in achieving value for money, taking account of strategic defence arrangements; and

   (b) the impact, including regional effects and industry development aspects, of defence procurement programs and institutional arrangements on particular industries such as shipbuilding, aerospace, electronics and engineering;

3. specify that the Commission report on the extent to which Australian industry is reliant on Australian defence procurement;

4. without limiting the scope of the reference, request that the Commission have regard for:

   (a) the Government's policy to promote defence self-reliance as enunciated in the 1987 policy information paper: 'The Defence of Australia';

   (b) priorities for development of the Australian Defence Force as outlined by the Force Structure Review of May 1991 and the study of Defence Policy and Industry in 1992; and

   (c) the Government's objectives of improving the efficiency and international competitiveness of Australian industry;

5. specify that the Commission avoid duplicating any recent substantive studies undertaken elsewhere; and

6. specify that the Commission have regard to the established economic, social and environmental objectives of governments.

GEORGE GEAR

31 August 1993

OVERVIEW AND RECOMMENDATIONS

Buying goods and services for the Australian Defence Force (ADF) is a basic part of national defence. It involves very large expenditure: nearly $5 billion a year or about half of total defence outlays. So the more efficient defence procurement can be made, the more Defence will be able to move its resources away from support activities towards combat and combat-related capabilities.

The Commission is impressed with the way defence procurement has been made more efficient in recent years. But there are competing, high priority calls on the Government's limited budgetary resources — and the Defence budget is forecast to continue to fall in real terms over the next few years. So it is critical to make the Defence dollar go further. The ADF has a clear interest in getting best value for money and the people of Australia rightly expect defence procurement to be conducted as efficiently as possible.

The Commission has identified three areas where it considers the greatest efficiency gains are available:

- **Australian industry involvement**: the Government is keen to optimise industry involvement in defence activities and procurement, as it explained most recently in its *Strategic Review 1993*. The Commission focuses in this report on ways to achieve that objective. It asks: how can Australian industry involvement be optimised? Should minimum or target levels of local content be set? Is there value in longer-term relationships between Defence and industry?

- **the Commercial Support Program**: it aims to free the ADF to concentrate on its core military functions, by having non-core support activities provided in the most cost-effective manner and increasingly by the private sector. The Program has achieved a great deal in its first three years, but the Commission asks: can it be implemented faster and broadened to include certain activities which are presently considered core rather than support activities?

- **the procurement process**: it has been improved in recent years, but Australian industry still has a raft of complaints, particularly about the costs of tendering. The Commission asks: what can be done to simplify, quicken, and in other ways improve the procurement process, to the benefit of Defence and industry — and the community generally?

Many of these questions are not new, nor are they easy to answer. In approaching them, the Commission has sought solutions which are efficient from both economy-wide and defence perspectives.

What is defence procurement?

Defence procurement is about obtaining and maintaining major capital items such as the ANZAC frigates, Collins Class submarines and F/A-18 aircraft. It also involves buying such everyday items as clothing and food. And it embraces the construction of facilities such as airfields and military bases. Estimated expenditures for 1994-95 on the principal components are:

- capital equipment $2.3 billion
- maintenance stores $1.1 billion
- construction and maintenance of facilities $0.9 billion
- equipment repair $0.4 billion

About 70 per cent of the goods and services are bought in Australia. Australian industry is playing an increasingly important role in the development and construction of major projects such as frigates and submarines, and specialised capabilities such as over-the-horizon radar.

The terms of reference for this inquiry also request the Commission to examine the impact of defence procurement on industry, on different regions in Australia and on the economy as a whole. That is a demanding task with the limited information available, but the Commission has undertaken a survey of firms with defence work and some econometric modelling to help it address these issues.

This inquiry is not about Australia's defence strategy or priorities, nor the size of the Defence budget.

RECENT IMPROVEMENTS IN DEFENCE PROCUREMENT

In the last few years Defence has introduced a number of changes that have improved the efficiency of defence procurement. The reforms reflect a more competitive and commercially-oriented approach.

The achievements include:

- the move away from Defence-owned factories through the creation of AeroSpace Technologies of Australia (ASTA) and Australian Defence Industries (ADI). The Government has announced its intention to privatise ASTA and is considering the privatisation of ADI;
- vigorous implementation of the Commercial Support Program;
- a move towards early shortlisting of tenderers in order to reduce tendering costs;
- a shift from cost-plus contracts to fixed price contracts;

- a move by Defence to life-cycle costing;
- extensive efforts by Defence to supply more information to industry about its pending requirements and to become more familiar with industry capabilities;
- greater involvement of Australian industry, as it has become more internationally competitive and better able to meet Defence needs; and
- a move away from compulsory Defence offset requirements.

While some of the changes came from broad government policies such as reform of government business enterprises and of government procurement guidelines, many have been Defence initiatives and have been well-progressed. Indeed, based on the Commission's examination of the procurement arrangements in the UK, Canada and the USA, the Australian system and efforts to improve it rank highly.

SCOPE FOR FURTHER GAINS

The participants in this inquiry, particularly from industry, suggested where further improvements could be made, notably:

- Defence should provide clearer guidance on the capabilities it wants industry to provide in order to enhance Australia's defence self-reliance;
- the policies and practices for Australian industry involvement are confusing and should be better enunciated;
- defence procurement policy and practice sometimes differ, and practice can vary within Defence — greater consistency is needed;
- under the Commercial Support Program there should be equal treatment of in-house and commercial tenderers; and
- the costs of tendering have to be reduced — they are excessive compared with the private sector and with some other public sector agencies.

AUSTRALIAN INDUSTRY INVOLVEMENT

The Government's *Strategic Review 1993*, taken together with its industry policy as set down in the White Paper *Working Nation*, provide a sound basis for defence policy for procurement.

Some inquiry participants argued that Defence should have a procurement policy which deliberately contributes towards meeting some of the Government's economy-wide objectives such as reducing unemployment or increasing exports.

In its *Strategic Review 1993*, the Government places defence policy for industry (and for procurement) firmly in a defence strategic setting. The Commission agrees with this approach. Defence itself should be required to make decisions only in a defence framework, albeit consistent with government purchasing policy. It is up to the Government to take into account the wider effects of defence procurement in terms of its economic, social and environmental policies. The opportunities to do so already exist. They include the consideration of Defence's annual Budget submission, and the interdepartmental and ministerial processes leading to Government decisions on major capital equipment projects.

Premiums for Australian production

According to the *Strategic Review 1993*, some projects may be of such high strategic priority that there are sufficient grounds for paying a higher price for Australian production rather than having to rely on an overseas supplier. But the Commission considers that Defence should be wary of paying premiums for Australian supply. It endorses the Government's approach that 'Australia's general strategy will be to avoid them as far as possible' (*Strategic Review 1993*, p. 71).

The major project for which estimates of the premium have been made, documented and published by Defence, is the F/A-18 fighter aircraft (*Review of the F/A-18 Industry Program*, March 1994). A premium of $700 million was paid and, although there were some general benefits in enhancing skills and upgrading industry capabilities which led to some follow-on commercial work, the principal objective of maintaining industry's capability of providing through-life support has proved difficult to sustain.

Premiums for the F/A-18 project

The assembly in Australia of 75 F/A-18 fighter aircraft during the 1980s incurred a premium, estimated by the Department of Defence to be some $700 million — 17 per cent of the total project cost of $4.5 billion (in 1993 prices).

For this additional cost, Australia's defence self-reliance was to have been enhanced by industry's capacity to maintain and provide through-life support for the aircraft. This industry capability is said to be difficult to sustain, because maintenance is carried out by the RAAF.

As evidenced by the servicing in Australia of other aircraft that were purchased ready-made from overseas, Defence can obtain the required expertise whether or not an aircraft is assembled in Australia.

This example demonstrates two critical elements in those projects which are judged to warrant paying a premium for Australian involvement: Defence must estimate the size of the premium, and it must ensure that the outcomes sought, and paid for, are obtained. The recommendations made in this report, if implemented, would reduce the risk of an F/A-18 situation occurring again.

The two largest defence projects today are the ANZAC frigates and the Collins Class submarines; each of these projects is expected to cost around $5 billion (at current prices). No benchmark price for overseas supply was ever established for them. Claims that the premiums for these projects are negligible cannot be proved. Anecdotal evidence certainly points in that direction because labour productivity on these projects is said to be approaching world best practice and management is said to be of a high standard.

Given the billions of dollars involved in defence procurement, the onus must rest with Defence to measure the extent of any likely premium, before the sourcing decision is made. Only in this way can Defence avoid inadvertently paying a premium. And if it does choose to pay a premium, it will be better able to justify the estimated additional costs against the strategic benefits.

The process of measuring premiums would be facilitated if as few constraints as possible on the source of the procurement were included in tender documentation. This has not been so in the past, because for some projects expected percentage levels of local content were specified before tenders were called. Defence has now agreed that minimum percentage levels of local content should not be specified, but it has moved towards setting target levels for each procurement project.

The Commission queries whether, in practice, percentage targets can achieve their intended outcome. In particular, they put the focus on the wrong objective. The paramount objective should be to establish and maintain certain strategic capabilities in Australian industry.

The Commission therefore recommends that:

1. **neither minimum nor target levels of local content should be specified in the procurement process. Nor, as a general rule, should the mandatory use of Australian prime contractors be specified.**

The Commission stresses that this recommendation would not prevent Defence from establishing strategically important capabilities in Australian industry. In particular, it would not prevent Defence from using Australian prime contractors when doing so is warranted for strategic reasons (as in the case of the Collins Class submarines). But sourcing decisions would be better informed

than at present because they would be made after proposals had been submitted, not before.

The recommendation does not reduce the need for Defence to continue to provide information to overseas firms about the strategic capabilities available in Australian industry. Moreover, Defence should encourage overseas firms to assess the scope for cost-effective Australian industry involvement. And Defence should make it clear that Australian industry involvement will be preferred, where it offers equal or better value for money.

Australian Industry Involvement (AII) Program

The AII Program sets out guidelines for local (Australian and New Zealand) industry involvement in the procurement of defence capital equipment. The guidelines have been going through an evolutionary process, the most recent version having been issued as 'Interim Advice' in June 1994.

According to that Advice, an overall target level of Australian industry involvement (AII) will be specified and tenderers will be encouraged to exceed the target levels.

The guidelines need to be revamped, to be made consistent with the Commission's first recommendation. Reference to levels of local content should be removed so that the focus of the guidelines is on capabilities in Australian industry that are essential to, or desirable in, a project and its through-life support. The existing components — Tier One, Tier Two, Local Content, Contract Specified Work and Defence Offsets — should be discontinued.

The Commission recommends that:

> **2. the Australian Industry Involvement guidelines should be revised to have only two components. The first component (Priority One) would specify the capabilities in Australian industry that Defence considers essential to a project and its through-life support. The second component (Priority Two) would indicate the capabilities in Australian industry that Defence considers desirable, but not essential.**

Appendix D to this report contains the Commission's suggestions as to how the AII guidelines should be modified to accord with these first two recommendations.

Longer-term supplier arrangements

The 1992 Price Report on *Defence Policy and Industry* concluded that there is a strong case for Defence to establish longer-term supplier arrangements with particular firms covering activities of high strategic importance.

The Commission agrees. Such arrangements are common commercial practice, particularly for the supply of specialised equipment or services. However, care must be taken to ensure that the arrangements do not stifle healthy competition and innovation, and so be to the financial disadvantage of Defence in the long term.

For lower value purchases (such as stores) long-term arrangements involve, for example, period contracts with regular retendering. Between tenders, the benefits of competition can be retained by using performance measures and benchmarking, and by reducing the security of tenure for the supplier in some circumstances. For major capital equipment procurements, the calling of public tenders is required to ensure best value for money.

COMMERCIAL SUPPORT PROGRAM (CSP)

The CSP is Defence's program for testing non-core activities by opening them up to tender. It is not necessarily a contracting-out program as in-house bids are encouraged. The Program aims to have non-core support services and products provided to core Defence activities in the most cost-effective way. CSP puts into practice the concepts of competition and best value for money.

The achievements are substantial. Since the CSP started three years ago, over 50 decisions have been made involving some $710 million of work. Two thirds of the decisions have resulted in contracts to commercial tenderers and one third have gone to in-house teams. Savings are expected to average around 30 per cent.

Defence was to have published by mid-1994 a categorisation of its activities as core and non-core, but this has been delayed. The Commission understands that the delay has to do largely with the issue of 'personnel required in uniform' and its impact on the extent to which activities can be regarded as non-core. This development has led to a new category, 'quarantined non-core', which is not subjected to the CSP process.

The more that activities are categorised as core or quarantined non-core, the less is the scope to capture gains from the CSP. Even on operational bases there are many activities, such as weapons systems maintenance and military base support, that could be undertaken (and already are in some other countries) by a

commercial arrangement but which are currently considered core activities. Because these are essentially strategic issues on which it has no expertise, the Commission engaged expert consultants to examine the strategic basis on which activities might be deemed to be 'core'.

The theme of the consultants' report (Appendix F) is that close integration of civilian and military capabilities is essential to maximise the operational effectiveness of the ADF. The authors say that this judgment applies not just to peacetime tasks and training, but also in the event of hostilities. They argue that the CSP needs to reflect these realities, by modifying the current distinction between core and non-core activities, and through close cooperation between the military and industry in providing combat support throughout Australia.

The Commission notes that the more that support activities become the responsibility of industry, the greater will be its capability to support the ADF, including the provision of a surge capacity. Evidence from the UK and the USA suggests that in Australia Defence is treating as core many more support activities than it needs to. Doing so significantly reduces both cost savings and industry support capability.

Defence needs to re-examine from time to time how it can focus resources so as to do the job better, using industry's increasing competence in a wide range of support tasks. There should be the flexibility to change over time where the boundary lies between core and non-core activities. The Commission suggests that support activities should be regarded as non-core unless shown to be core.

There are also many department-wide support activities, such as publishing and management of mainframe computing centres, for which there may be substantial potential savings and these also should be opened up to tender.

The Commission recommends that:

3. the support activities, which are currently regarded by Defence as core, should be examined with a view to testing them under the Commercial Support Program. Core/non-core determinations should be reviewed regularly.

The examination and subsequent reviews could be facilitated by convening an interdepartmental committee similar to that which recommended the initial CSP activity list.

Improvements to the CSP

The Commission received several complaints from industry about a lack of fairness in the treatment of tenderers for CSP activities.

Some participants asserted that in-house bids should not be allowed. But in the commercial world it is well accepted that the processes of opening up internal activities to competition, or even just announcing such an intention, can be a strong catalyst for beneficial changes within the firm. Such potential benefits should not be denied to Defence (and, through it, the Australian community).

The Commission considers that, in principle, in-house bids should be allowed. But in a few cases the costs to Defence of preparing an in-house bid may be relatively high. If there is also a low prospect of the bid succeeding, Defence should consider whether or not to proceed.

The Commission recommends that:

4. in cases where bid preparation costs are relatively high, and the probability of success for the in-house option is relatively low, Defence should consider the option of not proceeding with an in-house bid.

Many industry participants criticised the way transition costs are assessed under the CSP; in particular, redundancy costs for Defence personnel who would lose their jobs. The Commission understands that, for the purpose of evaluation, both commercial and in-house bids are loaded with their transition costs. However, it is Defence which pays any transition costs arising from the successful bid.

The Commission agrees that Defence should take transition costs into account in assessing CSP bids. But only the additional costs associated with the transition should be applied. For example, accrued recreation and long-service leave of Defence personnel are obligations acquired regardless of the CSP, and so they should not be applied in comparing bids.

Importantly, potential tenderers should be informed of estimated transition costs. That has not happened in the past but, in response to industry concerns, Defence has recently indicated its intention to do so.

The Commission recommends that:

5. under the Commercial Support Program, transition costs should be estimated and included in tender documentation.

Another source of complaint was inadequate accounting arrangements in Defence. Steps are taken to help ensure that any winning in-house bid actually meets the conditions of its (implicit) contract, but the Commission is not convinced that they are adequate to assure the integrity of the CSP. If that integrity is lacking, firms will cease to compete and that would undermine the long-term viability of the Program.

The Commission recommends that:

> **6. when an in-house team wins a tender under the Commercial Support Program, it should be managed within Defence as a commercially autonomous unit with its own set of accounts. It should be treated no differently from a commercial contractor. Monitoring and reporting arrangements should be put in place to ensure that the savings and performance agreed are achieved.**

Also, there must be provision for open and fair competition as contracts that were won by in-house teams come up for renewal. The Commission recommends that:

> **7. where the in-house option has won a contract for an activity under the Commercial Support Program, the activity should be opened to competition when the contract expires.**

The Commission is concerned that the speed of implementation of the CSP in the current Tier 2 phase (which is spread over six years) appears to be markedly slower than the achievements to date. The considerable adaptation required by both Defence and industry does take time, but the Commission calls on Defence to speed up implementation so that the savings obtained can all the sooner be applied to where they can best contribute to Australia's defence self-reliance.

The Commission recommends that:

> **8. Defence should take every opportunity to speed up implementation of the Commercial Support Program, to ensure that all the potential savings are achieved as soon as possible.**

A final word on the CSP. The Commission has been impressed by the commitment to it at senior levels in Defence. That commitment must be ongoing and shared across the armed services if the basic aim of the CSP is to be achieved in the years ahead.

OTHER PROGRAMS FOR INDUSTRY

Defence Industry Development (DID) Program

This program aims to develop local industry capabilities to meet long-term Defence requirements that are not met through specific procurement projects. Its annual budget is about $10-15 million.

The Commission recognises the useful role this program plays but considers that, because it is separately funded, there is a risk that projects are prioritised in too narrow a strategic setting.

The Commission recommends that:

> **9. the Defence Industry Development Program should be discontinued. Proposals of the type currently considered under it should be assessed and funded under the capital equipment and Defence Science and Technology Organisation programs.**

Defence Required Support Capability (DRSC) Program

All payments under the DRSC Program have been made to the Commonwealth-owned enterprise Australian Defence Industries (ADI). The payments are intended to ensure the maintenance of certain capabilities in munitions and ship repair that are not otherwise available from industry. The main drawback is that they lock Defence into a commitment to one company over a very long period. However, in recent years many DRSCs have been terminated. As any benefits from new arrangements at this time would be minimal, the Commission has not recommended any change.

Defence Export Program (DEP)

This program was established in 1992 in recognition that Defence can benefit both strategically and financially from certain exports. For example, the viability of through-life support in Australia for a strategically important capability is likely to be enhanced if that capability has also been supplied to other nations in Australia's region.

There would be a financial advantage to Defence if any export orders reduce unit costs of production in Australia.

The Commission considers that the Program should be evaluated in 1996. Meanwhile, Defence should investigate charging for some DEP services, particularly where non-generic services are provided to particular firms (much as Austrade charges for some of its services).

COSTS OF TENDERING

Right across industry the Commission heard the view that Defence tendering and contracting practices could be improved to reduce the costs to firms, and to Defence.

There is general agreement that Defence has improved the situation in recent years. But a 1992-93 survey undertaken for Defence indicated that a majority of respondents thought that two-stage tendering would reduce costs. Under existing arrangements, the costs for individual firms can be large (around 10 per cent) for small projects of less than $10 000, although they decline to about 1-3 per cent of project value above $1 million. If there are (say) still five contenders well after the process has begun, the total tendering costs can be considerable.

Participants were critical also that Defence tends to use the early stages to obtain free design work, that excessive documentation is required at the early stages, and that Defence commonly fails to adhere to a reasonable timetable in making decisions, and shortlisting tenderers.

It is legitimate for Defence to seek market and product information in the tendering process, but not at any cost. Firms must still make individual commercial decisions about bidding for Defence contracts. But the Commission considers that Defence should not frame tendering documentation in such a way as to require bidding firms to produce detailed reports or studies, at their own expense, prior to contract award. Such requirements should be met through funded project definition studies or through the contract itself.

Although multi-stage tendering has been used to some extent, it has potential to reduce costs further. For example, if a short list contains 4 or 5 tenderers, the subsequent costs will be substantial; yet comparable competitive benefits should generally be available from having just two final contenders. Too many stages of tendering can also be costly.

Many commercially available items can be modified to meet performance criteria specified for defence projects. This option can be precluded, and tendering costs increased, if the project is defined in terms of technical military specifications.

Participants also criticised what they regard as inadequate advance information given to tenderers about the selection criteria, and their relative weightings. Defence project teams appear to handle this aspect differently. The resulting uncertainty adds to tendering costs, because bidders try to cover all possibilities by providing an overly comprehensive proposal with associated documentation.

All those factors which increase the costs of tendering to industry also increase the resources needed by Defence to examine and assess proposals. Any streamlining of the process will produce dual savings.

The Commission recommends that:

10. to reduce the costs of tendering for itself and industry, Defence should proceed with multi-stage tendering involving more rapid shortlisting and less documentation than at present. In that regard, Defence should:

(a) use performance specifications in Requests for Proposals (RFPs) and Requests for Tenders (RFTs) wherever possible;

(b) circulate draft RFP and RFT documents to contending firms for comment;

(c) advise the appropriate length and format standards for registrations of interest, proposals and tenders in tender documentation;

(d) specify selection criteria and rank them in order of importance in tender documentation;

(e) issue more specific guidance to project teams to ensure that no more than the information required at each tendering stage is requested;

(f) allow adequate time for bid preparation;

(g) publish tender evaluation schedules as early as possible, and adhere to them; and

(h) advise losing bidders as soon as they are eliminated by the evaluation process.

The following table summarises what the Commission is driving at in relation to multi-stage tendering and tender documentation. The ITR or RFP stage may not always be required. The numbers are indicative, rather than a firm prescription. For example, where the ITR is to be used as a basis for shortlisting, more than 20 pages could be allowed in a submission.

Tender stages	Number of responding firms	Maximum number of pages allowed in a submission
Invitation to Register Interest (ITR)	Open	20
Request for Proposal (RFP)	5-6	Up to 100
Request for Tender	2	As required

Administrative costs to defence

Defence spending on the procurement process itself needs to be subject to the criterion of 'value for money'.

Commonwealth purchasing guidelines suggest that relatively simple (denoted 'basic') procurement processes are appropriate for purchases of up to $2000; purchases of higher value call for more detailed processes. While Defence procurement officers are trained to exercise discretion, such guidelines tend to be treated as rigid rules, with the consequence that a disproportionate amount of administrative cost is incurred in processing low-value purchases.

Defence could reduce administrative costs, and still satisfy Commonwealth procurement guidelines and other general conditions applying to government spending, by adopting a higher value limit on purchases for which 'basic' processes can be applied.

The Commission recommends that:

11. Defence should follow 'basic' procurement procedures for purchases of up to $10 000.

Administrative costs are likely to be better controlled than at present if project teams set, publish and adhere to a timetable. A further step would be to implement project-based accounting for major procurement projects so that the administrative costs are made known, and can thus be better controlled.

The next step would be to contract out elements of the procurement process. This could involve specialist positions within a project team, or significant parts of a project such as a specialist contracting team to negotiate final conditions of the contract. The Commission understands that some of these options have been used by Defence.

There could be substantial savings if the whole of the procurement process were competitively contracted to a commercial organisation. Trials of this nature would have the added benefit of giving Defence some benchmark against which it could compare its administrative costs, and a basis on which to strive for improved performance.

The Commission recommends that:

12. in order to improve the efficiency of the procurement process and to provide a benchmark for its in-house administrative costs, Defence should contract out the procurement process for a few selected projects.

IMPACTS OF DEFENCE PROCUREMENT

The Commission examined the economy-wide impacts of defence procurement, as well as its regional impacts and effects on industry development. It did so using its general equilibrium model (named ORANI) of the Australian economy. Because the Commission has not considered changes in the size of the Defence budget, it has modelled only selected changes in the composition and source (Australian or overseas) of procurement.

The modelling results show that defence procurement has a relatively small impact on the Australian economy as a whole.

However, defence procurement can have significant *regional effects*. The relocation of Army personnel (some 5000 persons when families are included) to the Northern Territory during this decade is having a considerable impact on Darwin. Other major projects, such as the construction of submarines in Adelaide and frigates in Melbourne, clearly benefit those regions. And Newcastle will benefit from the recent contract to build minehunter ships.

Defence procurement has had some major *industry development impacts.* As a result mainly of the dominance of the submarine and frigate projects, capabilities have been developed in naval shipbuilding and in defence applications of electronics and communications (including software support). In two other industries examined by the Commission, aerospace and information technology, Defence is not a dominant customer and does not drive industry development. But these outcomes are simply the consequences of Defence seeking value for money. They were not policy objectives. Defence should continue with that approach.

THE WAY AHEAD

Defence procurement has been made more cost effective in recent years, not least because a more commercial approach has been adopted and the benefits of competition between potential suppliers have been harnessed.

The Department of Defence must persist with its reforms, and take them further.

In particular, Defence must shift its approach to Australian industry involvement away from focusing on levels of Australian content, towards specifying capabilities that Defence considers strategically essential. It must give greater impetus to the Commercial Support Program by broadening its coverage and speeding up its implementation. And it must change its procurement processes so that they are less costly to itself and to industry. In

this report, the Commission has made some specific recommendations on how Defence should advance on these fronts.

Other issues

The Commission draws attention to its comments on some other issues:

- competition for defence work from the *Government-owned enterprises* AeroSpace Technologies of Australia, Australian Defence Industries and Australian Construction Services (see Section 4.4);
- *defence offsets* (Section 5.1.2);
- *sharing the costs of risk* in defence procurement projects (Section 8.2);
- adoption by Defence of industry-wide *standard forms of contract* wherever possible (Section 8.2.1);
- *quality accreditation* (Section 8.3);
- *intellectual property* (Section 8.4);
- accounting by Defence for its *administrative costs* in major procurement projects and *training* procurement officers (Section 8.5).

1 INTRODUCTION

The Commission's task, as set out in the terms of reference (see page facing Overview), is to inquire into and report on Australia's defence procurement. As part of its inquiry, the Commission has been asked in particular to report on:

- the effectiveness and efficiency of Australia's current defence procurement arrangements in achieving value for money, taking account of strategic defence requirements;
- the impact of defence procurement programs and institutional arrangements on particular industries such as shipbuilding, aerospace, electronics and engineering. This is to include an examination of the impacts of procurement on different regions in Australia and its impact on industry development; and
- the extent to which Australian industry is reliant on Australian defence procurement.

1.1 Inquiry background

A number of judgments and trade-offs have to be made by the Government and Defence in making decisions about defence procurement: between spending on defence and spending for other worthwhile community purposes; about allocating the Defence budget between procurement and other areas of expenditure; about allocating procurement funds among the various capabilities and equipment Australia would like to have; and about the role for Australian industry in supporting Australia's defence effort.

Numerous reports and inquiries have addressed such matters. Three of them are specifically mentioned in the terms of reference:

- the 1987 policy information paper *The Defence of Australia* (the '1987 Defence White Paper'). This paper set out priorities for Australia's defence self-reliance, and also confirmed broad industry priorities earlier identified in 1984 (see Chapter 3);
- the May 1991 *Force Structure Review*. This report identified key investment decisions for Defence within a constrained budget allocation. It recommended economies in support functions in order to maximise combat capabilities and to preserve a high proportion of the Defence budget for capital investment; and

- a 1992 study into *Defence Policy and Industry* (the Price Report). This looked into ways of maximising the effectiveness of industry in helping to meet Australia's defence priorities.

Other relevant reports and inquiries are:

- the *Strategic Review 1993* made public in February 1994. This reviews Australia's defence security outlook over the next three to five years;
- a Defence White Paper expected to be published later in 1994 which will develop detailed planning guidance for Defence into the first decade of the next century;
- a report into government procurement generally, published in March 1994, by the House of Representatives Standing Committee on Industry, Science and Technology (under the chairmanship of Mr A. Bevis, MHR);
- the Government's May 1994 White Paper *Working Nation*. This paper updates government policies in a number of areas, including industry development and procurement; and
- a parliamentary inquiry into Australia's defence exports currently being undertaken by the Trade Sub-committee of the Joint Standing Committee on Foreign Affairs, Defence and Trade.

The Commission aims to complement these other reports and inquiries. Its work is set in a broad context as, under its charter, the Commission is required to give high regard to the interests of the community as a whole (see Box 1.1). The Commission thus pays close attention to economy-wide efficiency, and also takes into account the social and environmental objectives of governments.

Box 1.1: **General policy guidelines for the Commission**

In reporting on industry matters referred to it, the Commission 'must have regard to the desire of the Commonwealth Government:

(a) to encourage the development and growth of Australian industries that are efficient in their use of resources, self-reliant, enterprising, innovative and internationally competitive; and

(b) to facilitate adjustment to structural changes in the economy and to ease social and economic hardships arising from those changes; and

(c) to reduce regulation of industry (including regulation by the States and Territories) where this is consistent with the social and economic goals of the Commonwealth Government; and

(d) to recognise the interests of industries, consumers, and the community, likely to be affected by measures proposed by the Commission.'

Source: Industry Commission Act 1989, s. 8.

1.2 Scope of the inquiry

Defence procurement is the acquisition of goods and services by Defence from industry or commerce. (In this report, the term Defence is generally used to include the Australian Defence Force — the ADF.) Procurement involves deciding what to buy, from where and from whom; equipment design and modification; tendering, negotiation and management of contracts; quality control, testing and evaluation; and through-life support.

Defence purchases from many firms in many different industries, both Australian and foreign. These firms and industries differ markedly in their dependence on sales to Defence.

Defence goods and services range from large capital equipment such as the ANZAC ships, Collins Class submarines and F/A-18 aircraft, to items such as uniforms and food supplies. Facilities such as airfields and buildings are procured for the ADF. Many services are bought from industry, such as base support services and equipment repair and maintenance. Some equipment and facilities may be designed specifically for defence purposes, whereas some commercially available goods may be suitable with little or no modification for defence use.

The inquiry focuses on the larger procurements rather than on the myriad smaller items purchased for the ADF. The inquiry is mostly concerned with the 'how' of procurement, rather than the 'what', although it is not always easy to make a clear distinction. Further, the Commission has not sought to scrutinise procurement arrangements for specific acquisitions.

Some matters are not under reference:

- Australia's defence strategy or priorities;
- the size of the Defence budget; and
- the allocation of the budget to personnel, running costs, capital equipment, etc.

Nor has the Commission examined the strengths and weaknesses of the existing organisational structure within Defence for dealing with procurement.

Further, the Commission has not examined the provision of defence housing. Some relevant aspects are covered in the Commission's report on Public Housing (IC 1993a).

1.3 Consultations, submissions and hearings

During the course of the inquiry, the Commission held a series of discussions with the Department of Defence and the ADF, and with many individual firms and industry groups. It visited ADF facilities around Australia. It also consulted in the United Kingdom, Canada, the United States and New Zealand. A list of the people and organisations visited is at Appendix A, and a description of procurement arrangements in the UK, Canada and the United States is given in Appendix B.

An Issues Paper was released in September 1993, and initial public hearings were held in Melbourne, Adelaide, Sydney and Canberra in October 1993. A Draft Report was released in June 1994, with a subsequent public hearing in Canberra in July 1994.

A total of 108 submissions from 75 participants was received during the inquiry. A list of those who made submissions is given in Appendix A.

1.4 Inquiry issues and report structure

Chapters 2 and 3 present introductory information about the nature and extent of defence procurement, describe purchasing arrangements, summarise current procurement policy and outline defence procurement programs.

Defence procurement policy is discussed in Chapter 4. Issues include whether defence procurement should be set in a defence or an economy-wide framework, whether premiums are justified for Australian supply, and policy for government-owned enterprises.

Program issues are discussed in Chapters 5 and 6. They discuss program objectives, their success in meeting those objectives, and concerns of participants.

Chapters 7 and 8 cover purchasing arrangements, including tendering. Chapter 7 focuses on reducing the costs of tendering, while Chapter 8 covers a number of other cost issues.

The remaining chapters examine the impacts of defence procurement. Chapter 9 deals with the economy-wide and industry development impacts, and the reliance of industries and firms on defence procurement. Chapter 10 deals with regional impacts.

The appendices include procurement arrangements in the United Kingdom, Canada and the United States; suggested Australian industry involvement guidelines; the Commission's modelling work; and a report by consultants on 'The Strategic Focus of the Commercial Support Program'.

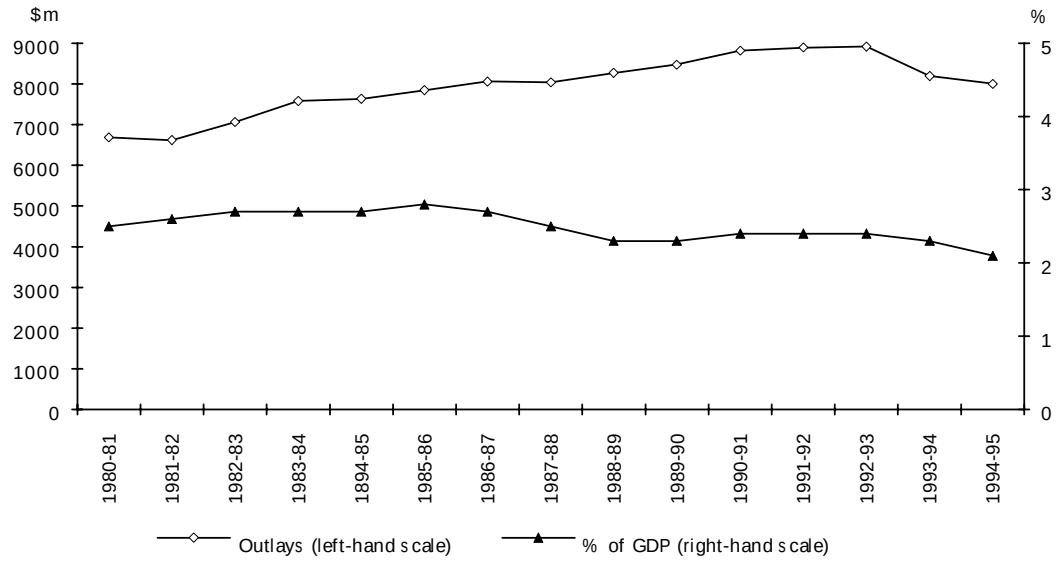
2 NATURE AND EXTENT OF DEFENCE PROCUREMENT

This chapter presents background information about defence outlays in total, and about defence procurement in particular. It examines various categories of procurement, and gives information about the proportion sourced in Australia.

2.1 Size of defence outlays and defence procurement

Defence outlays in 1993-94 totalled about $9800 million — equivalent to 2.3 per cent of GDP. In 1994-95, defence outlays are expected to decline to about $9600 million, or 2.1 per cent of GDP. Trends in defence outlays in real terms, and defence outlays as a proportion of GDP, are shown in Figure 2.1.

Figure 2.1: **Defence outlays, 1980-81 to 1994-95[a]**



[a] Outlays are in 1989-90 constant prices using the government final consumption expenditure deflator for defence. Figures for 1994-95 are estimates.

Sources: Defence 1993a, p. 309. Budget Statements 1994-95, p. 3.29. Sub. D100.

Estimates set out in the 1994-95 Commonwealth Budget show that total defence outlays are likely to decline further, both in real terms and as a percentage of GDP, over the years 1995-96 to 1997-98.

Defence outlays in current prices are shown in Table 2.1. The table also gives estimates for defence procurement expenditure, as well as its equipment and stores, and facilities, components.

Table 2.1: **Defence outlays and procurement ($m), 1989-90 to 1994-95**

	1989-90	*1990-91*	*1991-92*	*1992-93*	*1993-94*	*1994-95*[a]
Equipment and stores	3 068	3 512	3 607	3 847	3 861	3 827
Facilities	719	722	655	684	837	861
Total defence procurement[b]	*3 787*	*4 234*	*4 262*	*4 531*	*4 698*	*4 688*
(% of outlays)	44.7	46.7	45.5	45.5	48.2	48.6
Total defence outlays	*8 476*	*9 066*	*9 362*	*9 949*	*9 746*	*9 637*
(% of GDP)	2.3	2.4	2.4	2.4	2.3	2.1

[a] Estimates.
[b] Excludes other goods and services that are procured outside the categories of equipment and stores, and facilities.
Sources: Defence (various years)a. Defence (various years)b. Budget Statements 1994-95, p. 3.29. Sub. D100, p. 3.

Expenditure on procurement by Defence in 1993-94 was about $4700 million, accounting for 48 per cent of defence outlays. Expenditure on procurement is expected to be virtually the same in 1994-95.

2.2 Composition of defence procurement expenditure

The acquisition of goods and services for the Australian Defence Force (ADF) can be separated into three categories:

- equipment and stores;
- facilities (including repairs, maintenance and property leases); and
- other.

Further information is given in this chapter about the first two of these categories. The ‘other’ category consists of a number of smaller expenditure items, including Defence Required Support Capability (DRSC) payments and the Defence Industry Development (DID) program, and totalled about $70 million in 1993-94. Expenditure in this category is expected to fall to about $40 million in 1994-95, mainly due to smaller direct payments to ADI ($15 million

compared with $32 million) and lower DRSC payments (actual payments of $5 million compared with $20 million).

2.2.1 Equipment and stores

Equipment and stores include major and minor capital equipment, maintenance stores and equipment repair. Equipment and stores are expected to account for about 82 per cent of the total spent on defence procurement in 1994-95, or 40 per cent of defence outlays. New major capital equipment is expected to account for 54 per cent of expenditure on equipment and stores in that year (see Table 2.2), representing about 44 per cent of total defence procurement.

Expenditure in 1994-95 on equipment and stores is expected to be about $30 million less than in 1993-94.

Table 2.2: **Expenditure on equipment and stores, 1993-94 and 1994-95**

	1993-94		*1994-95*[a]	
	Expenditure	*Proportion of total expenditure*	*Expenditure*	*Proportion of total expenditure*
	$m	*%*	*$m*	*%*
Major capital equipment	2 016	52.2	2 069	54.1
Minor capital equipment	337	8.7	254	6.6
Total capital equipment	*2 353*	*60.9*	*2 323*	*60.7*
Weapons and armaments	130	3.4	142	3.7
Rations	64	1.7	69	1.8
Fuel	139	3.6	119	3.1
Other equipment and stores	775	20.1	757	19.8
Total maintenance stores	*1 108*	*28.7*	*1 087*	*28.4*
Equipment repair	*400*	*10.4*	*417*	*10.9*
TOTAL	**3 861**	**100.0**	**3 827**	**100.0**

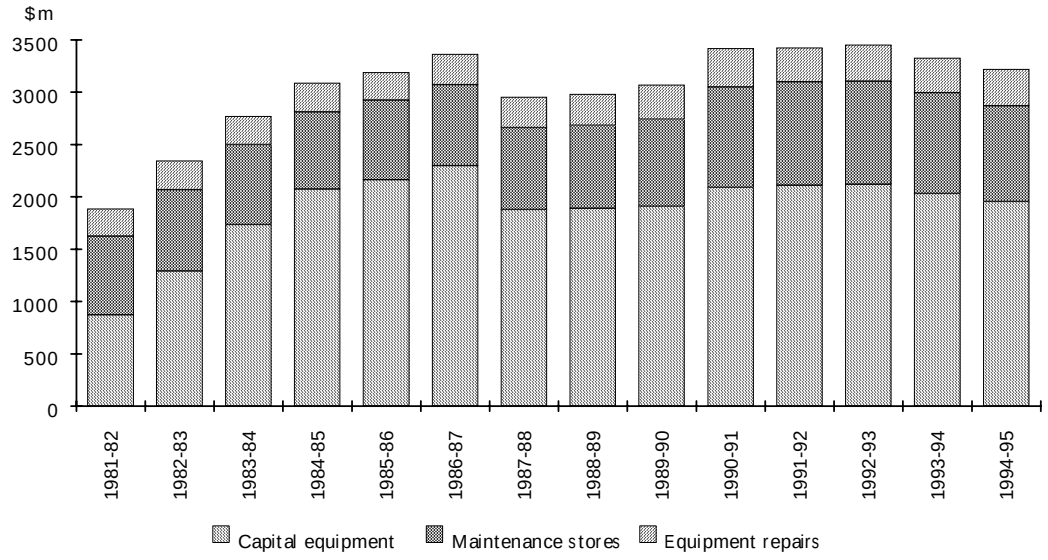
[a] Estimates.

Source: Sub. D100, p. 5.

Expenditure on equipment and stores in most years since 1984-85 has been running at significantly higher levels than in the early 1980s (see Figure 2.2).

This is mainly due to an increase in expenditure on major capital equipment. The increase in capital equipment expenditure between 1982-83 and 1986-87 is mainly attributable to the acquisition of F/A-18 aircraft, while expenditure since 1990-91 has remained high due to the ANZAC ship and Collins Class submarine projects. Expenditure on maintenance stores and equipment repairs has remained relatively constant.

Figure 2.2: **Composition of equipment and stores (in constant prices[a]), 1981-82 to 1994-95**



[a] 1989-90 Base Year – using the same price deflator as in Figure 2.1. Figures for 1994-95 are estimates.
Sources: Defence (various years)a. Defence (various years)b. Sub. D100, p. 3.

Major capital equipment

Defence is currently engaged in about 170 major capital equipment projects or phases of projects with a total value estimated at $30 billion. A major capital equipment project generally costs $20 million or more. Over $2 billion was spent on these projects in 1993-94 with another $2 billion expected to be spent in 1994-95. As shown in Table 2.3, the three largest projects (in terms of current annual expenditure) are the ANZAC ships, the Collins Class submarines, and the Jindalee radar network. Expenditure on these is presently totalling about $1 billion per year.

In 1993-94, new major capital equipment projects valued at over $700 million were approved. Subsequently, further new major capital equipment projects with a total project cost of over $3 billion have been approved. These projects,

for which about $214 million is planned to be spent in 1994-95, include the construction of six coastal minehunter ships; new command support systems for joint Defence headquarters; upgrade of the Navy Sea King helicopters; new detection and surveillance equipment for Sea Hawk helicopters; construction of two hydrographic ships; a Black Hawk helicopter flight simulator; and the acquisition of a strategic airlift capability to replace the 27-year-old Hercules C130E aircraft.

Table 2.3: **Estimated expenditure on selected major capital equipment projects ($m), 1993-94 and 1994-95**

	1993-94	*1994-95*
ANZAC frigates (net of NZ revenue)	464.5	441.0
Collins Class submarines	510.0	380.8
Jindalee Operational Radar Network (JORN)	104.0	202.9
Australian Light Armoured Vehicle	41.5	94.8
RAVEN field communications	91.2	72.7
F-111 avionics update	76.1	71.0
F/A-18 tactical fighter	36.4	39.6
PARAKEET Field Digital Trunk Communications	19.9	38.3
P-3C electronic support measures	19.0	23.2
Destroyer and utility helicopter	27.0	22.1
Chinook helicopters (net of receipts)	7.0	19.4
F-111 attrition aircraft	17.1	17.1
Supply Systems Redevelopment Project	75.0	14.9
Control and Reporting Units	16.5	13.4
Australian frigates	57.0	12.2
F-111 simulator update	13.5	8.7
F-111 automatic test equipment	6.2	7.7
Black Hawk utility helicopters	9.8	5.9

Source: Budget Statements 1994-95, p. 3.37.

Minor capital equipment

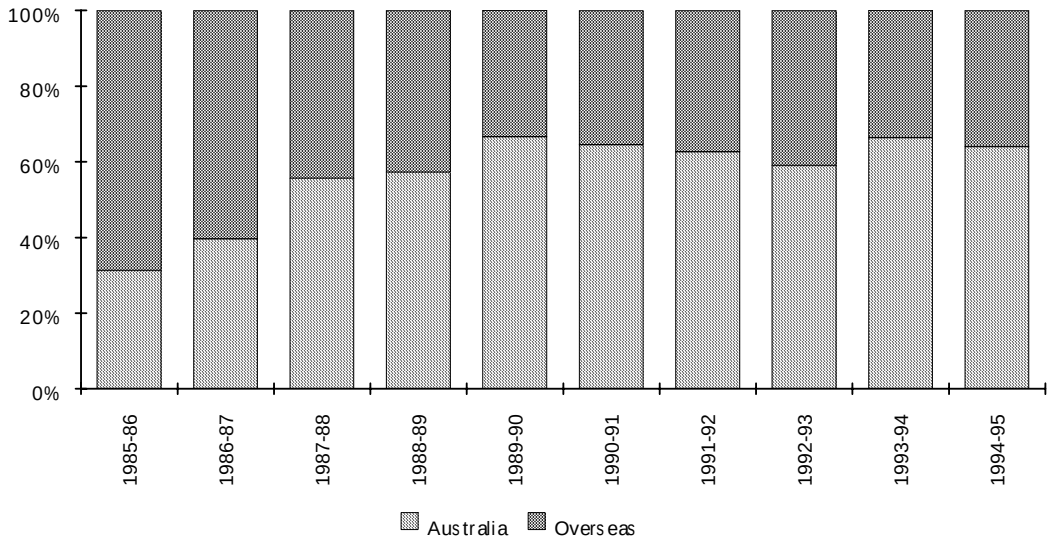
Approximately $254 million is expected to be spent on minor capital equipment projects (ie those generally less than $20 million each) in 1994-95 (see Table 2.2). This represents about 5 per cent of total defence procurement for 1994-95, or nearly 11 per cent of total capital equipment.

Capital equipment expenditure in Australia and overseas

A high proportion of total defence outlays, including personnel costs, is spent in Australia. For instance, in 1994-95, an estimated 88 per cent of defence outlays will be spent in Australia.

In regard to procurement specifically, in recent years the Australian share has increased. Expenditure on capital equipment, for example, in Australia has increased from about 30 per cent of the total expenditure on capital equipment in 1985-86 to over 60 per cent in 1994-95 (see Figure 2.3).

Figure 2.3: **Capital equipment expenditure in Australia and overseas, 1985-86 to 1994-95**



Values used for 1993-94 and 1994-95 are estimates.
Sources: Defence 1993b, p. 96. Ray, R. (Minister for Defence) 1994, p. 2.

Most foreign purchases of capital equipment have been from the United States (US) under the Foreign Military Sales (FMS) program. Purchases from the US accounted for 68 per cent of overseas capital equipment expenditure in 1985-86. In 1992-93, this had reduced to about 26 per cent.

Defence itself imported goods to the value of about $900 million in 1992-93, compared with the 1987-88 peak of almost $1300 million. The majority of direct defence imports are manufactured goods. Defence accounts for virtually all direct government imports.

Maintenance stores and equipment repair

Maintenance stores include weapons and armaments, rations, fuel and other equipment and stores. Expenditure on maintenance stores is expected to be about $1087 million in 1994-95 (see Table 2.2), accounting for about 23 per cent of total defence procurement. The largest single component (11 per cent) of maintenance stores is fuel.

The ADF sources most maintenance stores and equipment repair services in Australia. In 1992-93, for instance, around 74 per cent ($816 million) of total maintenance stores, and 85 per cent ($333 million) of total equipment repair expenditure was spent in Australia.

2.2.2 Facilities

Defence is expected to spend $861 million on facilities in 1994-95, representing about 18 per cent of total defence procurement, or nearly 9 per cent of total defence outlays. Expenditure on facilities is around one-fifth of the amount spent on equipment and stores.

About 60 per cent of facilities expenditure is for new buildings and works, and acquisitions, with about 30 per cent on building repairs, and about 6 per cent on property leases (see Table 2.4).

Table 2.4: **Expenditure on facilities, 1993-94 and 1994-95**

	1993-94		*1994-95*[a]	
	Expenditure	*Proportion of total expenditure*	*Expenditure*	*Proportion of total expenditure*
	$m	*%*	*$m*	*%*
New buildings and works	370	44.2	452	52.5
Acquisitions and disposals of property	91	10.9	66	7.7
Total capital works	*461*	*55.1*	*518*	*60.2*
Asset maintenance	46	5.5	48	5.6
Building repairs	249	29.7	246	28.6
Total facilities operations	*295*	*35.2*	*294*	*34.1*
Leases	*81*	*9.7*	*49*	*5.7*
TOTAL	**837**	**100.0**	**861**	**100.0**

[a] Estimates.

Source: Sub. D100, p. 5.

Capital works

The Government approved new capital works for 1993-94 totalling $148 million. The 1994-95 budget allowed $76 million for initial expenditure on major new or expanded projects. Estimated expenditure on significant facilities for 1994-95 is shown in Table 2.5.

The total cost of facilities presently under construction is estimated at nearly $2.2 billion, in 1993 prices.

Table 2.5: **Estimated expenditure on selected facilities ($m), 1994-95**

Army Presence in the North (APIN), Stage 1 (NT)	54.1
Defence National Storage and Distribution Centre (NSW)	40.8
RAAF Base Tindal development (NT)	25.8
HMAS Waterhen modernisation (NSW)	22.1
Bandiana Base redevelopment (Vic)	20.2
RAAF Base Scherger Airfield development (Qld)	17.0
Victoria Barracks refurbishment (Vic)	16.5
HMAS Stirling redevelopment, Stages 2B and C (WA)	16.3
RAAF Williams relocation (Vic)	16.0
Defence Centre Sydney accommodation (NSW)	14.8
Russell Offices redevelopment (ACT)	14.3
Lavarack Barracks redevelopment (Qld)	11.0
Puckapunyal Base development (Vic)	10.5
Albion Explosives Factory decontamination (Vic)	10.1
DSTO laboratory rationalisation (SA)	10.1
Larrakeyah Barracks redevelopment (NT)	9.8
Hydrographic Office relocation (NSW)	8.6
HMAS Stirling redevelopment, Stage 2D (WA)	6.9

Source: Budget Statements 1994-95, p. 3.39. Information from Defence.

Projects costing more than $6 million are subject to review and endorsement by the Parliamentary Standing Committee on Public Works, unless exemptions are granted. Projects under $6 million do not have to be referred to the Public Works Committee.

Facilities operations and leases

Facilities operations refers to the management and maintenance of existing defence facilities. Until July 1993, Defence was tied to the Australian Construction Services (ACS) for those services, but this is no longer the case.

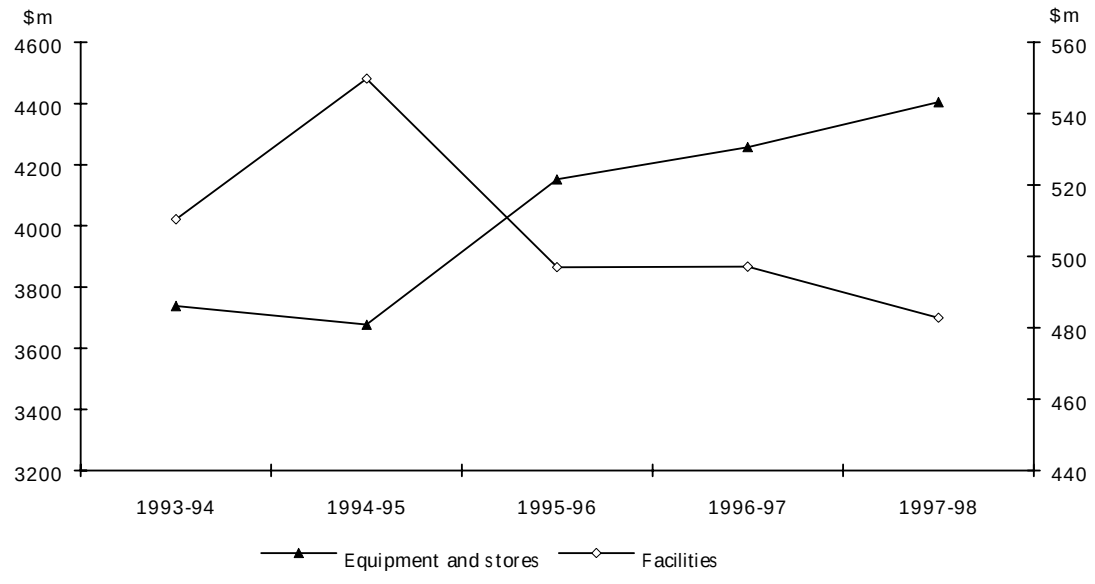
At the end of June 1994, Defence owned, leased, or held under other forms of tenure some 1087 properties. Of these, 563 were non-operational (eg administrative offices) and 524 operational properties. All non-operational properties are leased from the Australian Estate Manager (Commonwealth) or from private owners. In 1993-94, Defence spent around $81 million on leases. This is expected to decrease to $49 million in 1994-95.

2.3 Future trends in procurement expenditure

In spite of the expected lower real total defence outlays, expenditure on procurement is expected to be broadly maintained. Estimates of expenditure on equipment and stores, and facilities for the next four years are given in the 1994-95 Commonwealth Budget (see Figure 2.4). Expenditure on equipment and stores is expected to increase as a result of the Minehunter Coastal and P3C Update projects.

The projected increase in facilities expenditure in 1994-95 reflects initial outlays on new or expanded projects, for example, construction of facilities in the north and west of Australia and a program of facilities replacement.

Figure 2.4: **Estimated future expenditure**



Source: Budget Statements 1994-95, p. 3.29.

3 PROCUREMENT POLICY, PROGRAMS AND PROCEDURES

As background to the following chapters, this chapter describes current Government and Defence procurement policy, outlines existing industry programs, and summarises purchasing arrangements.

3.1 Government purchasing policy

Like other departments and agencies, Defence (including the ADF) is obliged to follow Commonwealth Government purchasing policy. But, within this constraint and the requirements set out by the *Audit Act 1901* and the *Finance Regulations*, Defence is responsible for determining its own purchasing procedures and strategies.

The Government's guidelines emphasise several fundamental aspects including value for money, open and effective competition, and ethical standards and fair dealing (see Box 3.1). Defence has adopted these principles in its own purchasing policies and arrangements.

In regard to industry development, government policy has aimed to maximise competitive opportunities for Australian and New Zealand (ANZ) suppliers in Commonwealth procurement. This does not involve discrimination against foreign suppliers, or aim to maximise the ANZ content of purchases, but it does involve the Commonwealth being, and being seen to be, a fair and demanding buyer supportive of internationally competitive ANZ suppliers. A previous 20 per cent price purchasing margin for Australian and New Zealand suppliers was abolished in 1989.

3.1.1 1994 Industry Statement

In its May 1994 White Paper on Employment and Growth, *Working Nation*, the Government responded to recommendations in a March 1994 report from the House of Representatives Standing Committee on Industry, Science and Technology into Australian Government purchasing policies (the Bevis Committee Report).

Box 3.1: **Fundamental aspects of purchasing policy**

'Value for money' does not mean that the lowest cost choice is automatically to be selected. All significant price and non-price factors including, but not limited to, fitness for purpose, through-life costs, fair market prices, timely delivery, post-delivery support and effective warranties, must be taken into account. Getting best value for money requires efficient procurement processes which minimise or eliminate inappropriate or unnecessary costs or delays for both the purchaser and the supplier.

'Open competition' requires government procurement to be visible, and accessible to potential suppliers. Visibility is promoted through the publishing of all publicly available invitations to bid, register interest, pre-qualify or offer proposals; and through the notification in the Commonwealth Gazette of all purchases arranged with a value of $2000 or more.

'Effective competition' requires timely and adequate information, independent action, absence of bias or favouritism, and ease of market entry for new or small suppliers. Government procurement can benefit from encouraging a competitive approach which promotes efficiencies in the marketplace.

'Ethical standards' in procurement are to ensure that business is conducted in a fair and reasonable manner, and with integrity. For those involved in the expenditure of public money, there is a special responsibility to behave honestly, to avoid waste, and to be accountable.

'Fair dealing' involves each purchasing officer being at all times an impartial and fair manager of public funds.

Source: Based on DAS Procurement Guidelines.

In that paper, the Government said it:

> is restructuring its purchasing framework to use its capacity as a major purchaser of goods and services to promote the development of Australian industry strategically, without compromising on quality or price. (*Working Nation* 1994a, p. 76)

Elaborating on this, the Government indicated that it wanted to use government purchasing as a tool in industry development:

> The Government's objective is to use its purchasing framework as an important element of industry development policy while also ensuring value for money for the Australian taxpayer. (*Working Nation* 1994a, p. 76)

In areas of specific relevance to the Commission's inquiry, the Government announced that:

- there would be an Endorsed Supplier Approach for day-to-day purchases of information technology and major office machines;
- agencies would be required to provide reasons why they do not purchase from Common Use Contracts; and

- a National Procurement Board would be established to advise the Government on purchasing policy and procedures.

The Government also announced that, although industry impact statements would be required for acquisitions over $10 million, Defence would be exempted 'because of its existing well developed and structured process' (*Working Nation* 1994a, p. 206). Similarly, Defence is to be exempted from the application of a possible two-envelope tendering process being examined by the Government (booklet attached to News Release 74/94).

Defence indicated (Sub. D74, pp. 2–3) that further government announcements on matters such as purchasing training, accredited purchasing limits and whole of life costing were expected, and these could have implications for defence procurement.

3.2 Current Defence procurement policy

Government purchasing procedures do not require explicit preference for ANZ suppliers. However, Defence often sees strategic value in the establishment and maintenance in Australian industry of relevant capabilities, as this adds to Australia's defence policy of achieving greater self-reliance.

3.2.1 Development of policy

The genesis of current policy lies in the Government's 1984 *Defence policy for Australian industry* statement which set out the broad principles of Defence's relationship with industry. These principles were derived from broader defence objectives rather than the attainment of economic or industry development objectives.

The 1984 statement outlined priorities for the use of defence resources for the development of local industry capability:

> (i) the repair, overhaul and adaptation of military equipment fundamental to Australia's defence in circumstances to which the government has given priority, and ... the provision of munitions, spares and other consumable stores for which we could least rely on overseas supply (including stockpiling and other actions to give greater assurance of supply); and
>
> (ii) the range of technologies and supply and support capabilities (including design, development and manufacture) identified as meeting the longer term needs of defence in accord with Government policy and Defence guidance as to an acceptable balance of strategic benefits and costs. (Ministerial Statement 1984)

Defence's relationship with industry was reviewed in *The Defence of Australia* (known as the 1987 White Paper), *Australia's Strategic Planning in the 1990s*

(ASP 90) and in the 1991 *Force Structure Review*. None of these reports changed the basic framework for defence policy for industry established in the 1984 Statement. However, commencing with the 1987 White Paper, increasing emphasis has been given to the strategic advantages of sourcing major capital equipment through Australian prime contractors and from Australian suppliers.

The Price Report

The 1992 study on *Defence Policy and Industry* (the Price Report), generally endorsed the 1984 policy. However, it sought to rectify some perceived policy shortcomings and made wide-ranging recommendations aimed at improving the defence/industry relationship. Price emphasised the important role of local industry as the 'fourth arm' of defence (Defence 1992a, p. i).

Echoing the 1984 statement, for example, Price called for 'a clear statement of strategic priorities for local industry support of the ADF and key defence-related technologies for its longer term development' (Defence 1992a, p. 16). According to Price:

> Defence policy for industry cannot provide a detailed, immutable prescription for industry planning. However, Defence should provide sufficient information for industry to be able to develop their own plans. (Defence 1992a, p. 5)

The Report indicated that a model developed by Professor Dibb in an associated paper would be used as the basis for refining Defence objectives for industry, using updated strategic guidance and the analytical process established within Defence for identifying force development priorities (see Box 3.2).

Longer-term supplier arrangements offer some advantages, the Report argued. As well as serving strategic objectives, such arrangements establish Defence demand in a way which 'allows local firms the prospect of more sustained output and defines performance criteria for firms [and offers] the prospect of extending best commercial practices more widely in Defence procurement arrangements' (Defence 1992a, p. 22).

Defence has made considerable progress in implementing the Price Report's recommendations. For example, information about future purchases of major capital equipment and facilities has been made publicly available, as have some project-specific Australian industry involvement plans; defence/industry communication and study initiatives have been developed; the export program has been revised; and detailed studies of particular industry sectors (the first on the information technology, electronics and communications sector; and the second on shipbuilding and repair) are being undertaken by the Defence Industry Committee. In its submission, Defence indicated that it is examining ways of reducing the cost of doing business with Defence, establishing long-

term relationships with industry suppliers, and looking at means to involve industry earlier in the acquisition process.

Box 3.2: **Dibb's priorities for Defence capabilities from Australian industry**

Professor Dibb suggested three orders of priority for the broad capabilities which Defence requires from Australian industry:

- first order priorities are those essential to the development of Australia's self-reliant defence posture. In particular, they concern capabilities in information technology, communications and electronics which are crucial for the development of Defence's intelligence, surveillance, command and control and combat performance. Although these were stated as first order priorities, Dibb assessed that paying high premiums could and should be generally avoided. The industrial capacity to adapt, repair and maintain the ADF's combat capabilities, including the provision of through-life support, was also considered a first order priority by Dibb;
- second order priorities concern industry capabilities that are generally strategically important, but where there is no strategic justification for paying a significant premium (generally less than 10 per cent). They include the ability to build naval platforms; and
- third order priorities are capabilities of lower strategic importance, or those required less urgently. Here normal commercial practice should be allowed to determine the level of Australian industry involvement.

Source: Derived from Defence 1992a, p. 14, and Dibb 1992.

Strategic Review 1993

This most recent review includes an examination of Defence relations with industry, and contains a special annex entitled *Industry Priorities* (which is reproduced in Appendix C of this report). It states that Defence is looking to industry to provide maintenance and support of equipment and, through the contracting out of service provision to industry via the Commercial Support Program (CSP), to provide a range of other support services such as catering and base support. 'Through achieving greater efficiency, Defence is able to move more of its resources towards the combat end and away from support activities' (Defence 1993c, p. 69).

In regard to major new capabilities, the Review states that 'Defence will look to maximise local industry involvement, usually via the use of local prime contractors teaming, as necessary, with overseas suppliers of equipment and technology in order to secure best value for money' (Defence 1993c, p. 71). But

the Review recognises that local industry will not always be competitive (Defence 1993c, p. 71).

As did its predecessors, the Review takes a cautious approach to the question of price premiums for supply from Australian industry:

> Defence should continue to look for efficiency and cost-effectiveness in the support provided by industry. Normal commercial practice should be applied, except when premiums are warranted for specific economic, security or self-reliance purposes. (Defence 1993c, p. 55)

It is argued that the need for premiums should be 'determined case-by-case, bearing in mind that long-term government assistance to industry has on occasions preserved obsolescence, rather than maintained competitive capabilities' (Defence 1993c, p. 55).

The Review does not elaborate, however, on circumstances in which premiums are warranted for 'specific economic purposes'. The Commission's views on this matter are set out in Chapter 4.

The Review identifies 'key capabilities for industry support', and consequent requirements for Australian industry (see Box 3.3). These build on the 1984 Statement and, according to the Review, 'more specific capability priorities for industry will continue to evolve as Defence more precisely defines operational requirements and the capabilities to meet these requirements' (Defence 1993c, p. 72).

The Review says there are some circumstances in which Australian industry involvement is absolutely necessary, though 'supporting Australian industry is not a strategic objective in its own right' (Defence 1993c, p. 69):

> In certain fields, such as communications, intelligence and surveillance, even if Australian industry were not internationally competitive (and there is strong evidence that it is), Defence investment in Australian industry is necessary to ensure that the best technology imported from elsewhere is adapted and sustained to retain an edge. (Defence 1993c, p. 72)

This could also involve the establishment of 'closer relationships with particular local suppliers' (Defence 1993c, p. 70).

The Review emphasises defence relationships with South-East Asia. It notes that exports can serve Australia's objectives of regional security by strengthening the security of Australia's neighbours. 'At the same time, defence exports support our national capacity for defence' (Defence 1993c, p. 74).

3.2.2 Current status of policy

Since at least the 1984 Statement, Defence procurement policy has been firmly based on defence strategic goals, rather than broader economic or industry development goals. Support of Australian industry is not a defence strategic objective in its own right.

A fundamental aim of current policy is to limit the role of the military forces in providing support services which industry can provide more efficiently. This will free resources for core military activities. The Commercial Support Program (see Chapter 6) encourages this move.

The areas in which Defence would generally buy Australian, rather than import, were set out in the 1984 Statement and developed in the *Strategic Review 1993*. There are two broad areas where Australian industry involvement has high strategic priority: maintenance and support services for military equipment; and the through-life support, adaptation and systems integration of high technology equipment. Although Defence seeks to maximise Australian industry involvement, usually involving Australian prime contractors, there is little emphasis on manufacture as such in defence policy for industry, except in the special case of high-use munitions.

Even though there are some examples where minimum or target levels of local content have been specified in major capital equipment acquisitions, there is no 'buy Australian' policy in defence policy for industry. Policy recognises that case-by-case consideration of the strategic and financial costs and benefits of sourcing from Australian industry is required and that Australian industry will not always be competitive. Decisions are based on value-for-money. Price premiums are not ruled out if justified strategically, but Defence policy is to minimise any necessary premium.

Defence policy has increasingly recognised the strategic and financial advantages to Defence from export of defence and defence-related goods and services.

Work is continuing within Defence on specifying its priorities for industry in more detail; and considering the strategic and value-for-money benefits of longer-term supplier arrangements.

Box 3.3: **Key capabilities for industry support**

Australian industry has an important role in supporting major capability areas, including:

- C^3 — adapted to the Australian environment, fully integrated and secure. Industry support includes software support and systems integration, recognising that some technology and infrastructure transfer may be involved. Defence will aim to maximise the use of technology and infrastructure that has dual defence and civil applications.
- Intelligence — including high levels of operational availability on a continuous basis and timely distribution to users. As for C^3, software support and systems integration are important.
- Surveillance — Defence needs advanced technology adapted to the Australian environment, and advanced facilities to integrate and analyse information from various sources. Maintenance and through-life support of these systems by Australian industry is a high priority.
- Weapons platforms — the support of weapons platforms is a high priority. Adaptation to meet Australian conditions is important.
- Combat systems — the support of combat systems is of similar priority to the weapons platforms. It includes the capability to integrate weapons systems with associated C^3. It includes sensors and their integration in combat data systems, and the attendant need to adapt them to Australia's environment. Support of weapons and sensor countermeasures is important.
- Munitions — Defence will be looking for a combination of supply by Australian industry — for high-use items and those items where there is greatest risk of disruption of overseas supply — and stockpiling of overseas supplies.
- Logistic support — including transport and supply of consumables. Defence will make maximum use of facilities and services already available in the community. In particular, Defence will be looking for increased industry support in the north of Australia.

These priorities suggest that the support of key capabilities will involve all major industry areas that supply Defence:

- Electronics/optics — to support intelligence systems, weapons systems and surveillance, and countermeasures.
- Communications and Information Technology — to support C^3, intelligence, critical management and administrative systems, and to provide systems integration.
- Aerospace — to maintain aircraft and their systems, and to adapt aircraft systems.
- Shipbuilding and repair — to maintain ships and their systems, and to adapt those systems.
- Munitions — to produce stocks of high-use munitions, and to maintain munitions such as missiles.
- Land vehicles — to repair, maintain and adapt vehicles suited to Australia's environment.

Note: C^3 stands for 'command, control and communications'.

Source: Defence 1993c, p. 52.

3.3 Defence programs for industry

A number of industry programs aim to put the general principles of defence procurement policy into effect. The four programs described in this section have different objectives, but each aims to maintain or develop industry capabilities to meet strategic needs.

The CSP is somewhat different in nature and is discussed in Chapter 6.

3.3.1 Australian Industry Involvement (AII) program

AII is the term used 'to describe a program of activities to be undertaken by Australian [and New Zealand] industry which is established under a contract to supply equipment and related services to Defence' (Defence 1993d, p. 1). Approximately 16 Defence personnel are involved in providing advice, managing and administering AII.

Draft 'Revised Guidelines' for AII, published in September 1993, identified three elements: Local Content; Contract Specified Work; and Defence Offsets. They applied to major capital equipment acquisitions. The Revised Guidelines were followed by 'Interim Advice' on the AII framework issued in June 1994. These latter guidelines, which also apply to minor capital acquisitions and logistics programs, dropped the concept of Contract Specified Work.

The Interim Advice defines Local Content and Defence Offsets:

> Local Content means the value added by Australian and New Zealand industry, and refers to that part of a contract that is obtained from local (ANZ) sources ...
>
> Defence Offsets are activities of defence and technological significance which are directed to Australian industry as a result of receiving a contract as either a prime or subcontractor, to supply goods and/or services to the Department of Defence. (Defence 1994e, p. 2)

Contract Specified Work was used in the Revised Guidelines to refer to activities which Defence specified should be undertaken in Australia 'because of their importance in the development or maintenance of industry capabilities that contribute to defence self-reliance' (Defence 1993d, p. 2).

Until recently, Defence Offsets were required on all contracts where the imported content of goods sold to Defence exceeded $2.5 million. Firms exceeding that threshold were required to place work with Australian firms, transfer technology to Australian firms or provide some other 'offset' to a value of 30 per cent of the value of the imported content as a condition of sale.

The Revised Guidelines and the Interim Advice have changed the role of Defence Offsets. They are now intended to be a mechanism of last resort and must be linked more closely to Defence capability requirements. According to

Defence, 'offsets are now used only when industry objectives cannot be satisfied through other means' (Sub. 29, p. 21). As expressed in the Interim Advice, 'offsets may now be decided on a case-by-case basis to meet specific strategic and/or industry objectives and negotiated as part of the contract' (p. 2).

Both the Revised Guidelines and the Interim Advice have introduced a two-tier approach to AII. In the Revised Guidelines, Tier One specifies the minimum level of Australian industry involvement required by Defence, whereas Tier Two allows firms to offer greater levels of local content. As expressed in the Revised Guidelines, the intention of the two-tier approach is to 'allow Defence to identify premiums for increased levels of AII and evaluate these in terms of overall objectives' (p. 2). In the Interim Advice, Tier 1 AII 'identifies the AII activities that are required from Australian industry to provide support for an important strategic asset' (p. 1). Tier 1 AII will set out a minimum 'quality' and an associated minimum level (or 'quantity') of AII. Tier 2, in the Interim Advice, describes activities which 'are aimed at the ... objective of broadening the industrial support base in key areas' (p. 1). 'Tier 2 AII will seek to optimise competitive local content' (p. 5).

According to the Interim Advice, Defence will also provide industry with an 'overall target level of AII' for each project. The target, which will be expressed as a percentage of the contract price, will appear in the Request for Tender, and will 'represent the total AII (Tier 1 and Tier 2) expected for the project. Tenderers will be encouraged to exceed the target AII level specified in the RFT' (p. 5). However, at the Draft Report public hearing, Defence indicated that tenderers coming in with less than the target level would not be ruled out (Transcript, p. 535).

When tenders have been evaluated and a contract is signed, an AII plan for the project is finalised, based on the AII proposals lodged by the successful tenderer. The plan is then used, over the life of the project, to monitor whether Defence's industry objectives are being met. The successful tenderer (now the prime contractor) becomes responsible for monitoring progress towards achieving the AII plan, and for making regular reports to Defence on how the AII plan is being fulfilled by it and its subcontractors.

3.3.2 Defence Industry Development (DID) program

The DID program 'develops local industry capabilities to meet long-term Defence requirements that cannot be better developed by other areas of Defence such as DSTO and the Services through their normal acquisition activities' (Sub. 29, p. 21). According to Defence, DID specialises in developing local industry capability where:

- there is no current Defence requirement for the capability but its development is needed to prepare for anticipated Defence purchases; or
- there is a current Defence requirement for the capability but Defence's mainstream purchasing areas lack the necessary project management skills. (Sub. 29, p. 21)

DID funds firms in Australia to undertake tasks which require the firm to increase its capability in order to compete. Most of the tasks funded under DID have related to the development stage in the supply process and, in particular, to the development of concept demonstrators.

Australia has entered into a number of Defence Equipment Procurement Memorandums of Understanding with other countries. The DID program has been used on at least 5 occasions to provide initial funding under these MOUs in order to facilitate local industry involvement.

DID has been continued after it was reviewed in 1992 as part of the Price Report. A number of changes were made, including the introduction of an annual report, and revised evaluation criteria were implemented from 1993-94 (see Box 3.4). Defence commented that these 'criteria are as yet not sufficiently clear' (Transcript, p. 551) and that the DID program is currently subject to internal departmental review (Transcript, p. 549).

Box 3.4: **DID evaluation criteria**

- DID will not fund tasks to develop local industry capabilities that other areas of Defence are better placed to develop.
- There must be a reasonable degree of confidence that the proposed task will be achieved.
- There must be a significant increase in local industry capability as a result of the task.
- The increase in local industry capability must provide a significant strategic advantage to Defence.
- The net cost to Defence of developing and maintaining the increase in local industry capability must not exceed the value of the strategic benefits.

Source: Defence 1993e.

About three quarters of DID projects have originated in Defence, the rest in industry. Some DID projects are put out to open tender, but most go through a closed tendering process.

Typically, up to about $1 million can be provided to an individual firm for an approved task under DID. However, greater amounts can be made available when funding is spread over a number of years.

Expenditure under DID totalled about $10–14 million annually in the four years to 1993-94, and is expected to be about $13 million in 1994-95.

DID expenditure has been highly concentrated among a few firms. Over the four years to 1991-92, about 72 per cent of DID expenditure went to just seven firms, each receiving over $1 million. AWA Defence Industries alone received $13 million, or over 40 per cent of total funding. Its share has subsequently declined. Reflecting DID's concentration on communications (including electronic warfare) and electro optics, and the degree of funding received by AWA Defence Industries, over 60 per cent of DID funding over the four-year period went to South Australia.

According to Defence, 25.2 full time equivalent personnel are involved in the administration of the DID program.

3.3.3 Defence Required Support Capability (DRSC) program

This program provides Defence funds to cover certain costs associated with establishing or maintaining capabilities in industry for which there are little or no commercial markets, which are normally underutilised in peacetime, but which, for strategic reasons, the Government requires to be maintained in Australia (see Sub. 59, p. 17).

The program has been applied only to certain operations of Australian Defence Industries (ADI). The Deed of Transfer, which established ADI, specified a number of DRSCs which the Commonwealth was required to maintain. They relate to certain strategically important munitions and defence production facilities, and the maintenance of the Captain Cook Dock at Garden Island. Table 3.1 sets out information provided by Defence about DRSC obligations.

Table 3.1: **DRSC obligations to ADI** ($m)

Year	*Payment*
1990-91	15.2
1991-92	13.8
1992-93	15.8
1993-94	15.3
1994-95 (estimate)	13.2

Source: Defence.

According to Defence, it would be very unlikely for DRSC funding to be provided to other firms, given the move towards more commercially oriented procurement arrangements in recent years.

Initially, there were 33 separate DRSCs. These were covered in a single contract between the Commonwealth and ADI which is due for review and renewal by 1 July 1995. As ADI's facilities have been rationalised, many original DRSCs have been terminated. By April 1994, they had been reduced to 22, with a further reduction to 10 by June 1994. It is expected that only about 7 will continue beyond 1996. Arrangements are being finalised for those remaining to be the subject of separate contracts.

3.3.4 Defence Export Program (DEP)

The DEP is a recent Defence initiative, evolving from recommendations in the Price Report. The DEP builds on export support previously provided by the Defence Exports Facilitation Section, and aims to provide marketing and promotion assistance to Australian industry. The DEP is more firmly linked to Defence strategic goals than its predecessor. Its 1993-94 budget was about $1.8 million, and the budget for 1994-95 (including salaries) is about $4 million.

In order to meet regional needs and Defence strategic priorities, the DEP focuses on promotion within the region. A joint working party on defence materiel cooperation has been set up with Malaysia. Preparation is well in hand to initiate defence industry dialogue with Indonesia. Defence Attaches are being trained on strategic export opportunities and briefed on Australian industry capabilities to meet regional requirements. The Defence Attaches deal with the government-to-government or military-to-military liaison concerning materiel cooperation programs, exchange of information on requirements and identification of common requirements for defence goods and services.

In cooperation with Austrade, specialist Defence Trade Commissioners have been recruited for posts in Indonesia, Malaysia and Thailand. The Defence Trade Commissioners will concentrate on developing programs to assist Australian industry in marketing to regional defence organisations and industries.

Assistance to exporters is also provided by Austrade which has a dedicated senior officer for defence and aerospace activity, and by the ADF which provides equipment and staff in support of exhibitions and other promotional activities.

In addition, Defence support is available to industry through the provision of Defence personnel and technical support in conducting trials and demonstrations, and providing reports on Australian products as an aid to marketing for firms.

A draft Defence Export Strategy Statement was published in March 1994.

3.4 Purchasing arrangements

Defence uses a number of different purchasing arrangements, depending on the nature, strategic importance, source and value of the goods or services being sought. The arrangements include use of public tender, written and oral quotations, and standing offer or common use contracts (including electronic purchasing). Box 3.5 summarises the main possibilities.

Box 3.5: **Overview of Defence purchasing arrangements**

Category	**Purchase authority**	**Process**
Capital equipment acquisitions	Highly centralised	Cabinet approval (over $20 million) Invitations to register interest Requests for proposal Requests for tender Source selection Project management
High value procurements	Centralised	Invitations to register interest Requests for proposal Requests for tender Source selection Project management
Direct purchases between $2000 and $30 000 [up to $100 000 for 'standard' services and supplies]	Decentralised	Written quotations
Less than $2000	Highly spread	Oral quotations, petty cash, Australian Government credit card

Source: Based on Allen Consulting Group 1992a, p.14.

Non-capital equipment purchases can also be categorised as advanced, intermediate or basic. High value procurements generally fall into the advanced category, direct purchases above $2000 into the intermediate category, and purchases below $2000 into the basic category.

Only a small proportion of defence procurement funds in any given financial year is available for new capital equipment and facilities projects. Most funding is committed to ongoing payments for projects commenced in earlier years, and to equipment and stores for the ADF.

3.4.1 Major capital equipment

Generally a capital equipment acquisition is considered major when the costs incurred in bringing it into operational service, and providing for the first three years of spares, is $20 million or more.

Deciding what to buy

In broad terms, the decision making process is as follows:

- arguments for an ADF military capability are advanced in a Defence Force Capability Proposal (DFCP). This is an analysis of options in terms of existing and future force structure, preparedness requirements and broad resource allocations;
- a Major Capability Submission (MCS) is drawn up once the DFCP has been endorsed. It considers acquisition and operational costs, manpower, facilities, training, R & D, test and evaluation, life-cycle costing, and scope for Australian industry involvement; and
- an Equipment Acquisition Strategy (EAS) is developed broadly in parallel with the MCS. It is the principal management document in the procurement of capital equipment. It specifies the method of procurement, procurement authorisations, the schedule of planned events and how local industry is to be involved.

Major capital equipment acquisitions are considered by Cabinet.

Tendering

Following Cabinet approval, formal approaches are made to industry, along the lines defined in the EAS. These may take the form of an Invitation to Register Interest (ITR), followed sometimes by a Request for Proposal (RFP), or Defence may proceed directly to issuing a Request for Tender (RFT).

An ITR canvasses the ability of interested companies to undertake and complete the project, and to assess relevant security aspects. RFPs can be used to seek

information from industry to further define requirements, to canvass alternative equipment options, to obtain estimates of costings and to phase projects. Defence may also ask firms to participate in a Project Definition Study, paid for by Defence, before releasing a RFT.

Draft documents are sometimes released for information as, for example, in the case of the F-111C avionics update program. In that program, during the two years preceding the release of the Request for Tender (RFT), draft versions of the technical specifications were circulated to any company expressing an interest or believed to have a project-related capability (Sub. 29, p. 23).

When ready, the Program Manager issues the RFT, possibly only to short-listed firms. When responses to the RFT have been received, the project evaluation stage commences. The principal objective of this stage is to identify the tenderer which offers best value for money.

Usually a Tender Evaluation Board, consisting of Defence personnel from various specialist areas, is convened under the authority of the Project Manager. Tender evaluation can be a lengthy stage, involving assessment of various important design, performance, financial and risk elements. Evaluation proceeds against a set of criteria, generally established earlier and made available to firms, at least in general terms, in RFTs.

Having evaluated the tenders, the Project Manager prepares a Source Evaluation Report (SER).This details the results of the evaluation of tenders, provides a ranking of offers, recommends a preferred tenderer and explains the implications of accepting the recommended offer. The SER is endorsed within Defence and, in major contracts, Cabinet approval is obtained.

Contract negotiation and implementation

The final stage is to negotiate the contract with the successful tenderer.

Many contracts themselves involve a series of stages. These may cover development of an acceptable design, building and acceptance of a prototype, and then production of the required equipment. Contract stages may involve different bases or methods of payment, for example cost-plus, variable or fixed price. Defence is placing increasing emphasis on using fixed price contracts wherever possible.

In major acquisitions, a Project Manager and team are established quite early in the process. They take part in the preparation of the EAS, assist in evaluation of tenders, and prepare the SER. Following the selection of the tenderer, project teams are involved in finalising contract negotiations, and then become responsible for its administration. Project teams usually comprise both military and civilian Defence personnel.

3.4.2 Minor capital equipment

A capital equipment project is generally considered minor where the costs incurred in bringing capital equipment into operational service and providing the first three years of spares is less than $20 million. Minor capital equipment procurement is usually managed by the relevant Service (ie Army, Navy, Air Force) or Departmental Program. Minor capital projects use the procedures of the major capital equipment projects (outlined in Section 3.4.1) as a guide rather than a rule.

3.4.3 Facilities

With some minor differences in the approval stage, the procurement of facilities follows a similar process to major capital equipment.

In contrast to capital equipment acquisition proposals which generally require no specific Parliamentary approval, facilities projects valued at more than $6 million are subject to review and endorsement by the Parliamentary Standing Committee on Public Works, unless exemptions are granted. According to Defence, this clearance is usually provided after the Government has approved the project, and an environmental clearance for the project has been given.

In the past, Defence and other Commonwealth departments were obliged to use Australian Construction Services (ACS) when designing or building new facilities. In 1992, the Government decided that departments and authorities could employ private contractors, provided the ACS was given an opportunity to quote for the work to be undertaken (*Finance Circular* No. 1992/10, Ref. 87/3765). Defence initially automatically included the ACS in all shortlists of tenderers, but has since decided that the ACS will no longer have an automatic right to proceed to the Request for Tender stage. Until 30 June 1993, departments were also obliged to use the ACS for repairs and maintenance to facilities when the cost of such work exceeded certain thresholds.

3.4.4 Other equipment and stores

Non-capital equipment purchases (which include logistics programs) are generally made by the materiel and support sections of each Defence Program, including the three military services.

Oral quotations may be sought for purchases valued at $2000 or less, and potential suppliers may be limited to known and proven suppliers. For requirements between $2000 and $30 000, written quotations are generally obtained from potential suppliers identified by procurement staff. For some higher value procurements, more formal public quotation or tender processes

may be used. There is some flexibility though, and the procurement processes used can be varied according to the degree of complexity or management risk associated with the purchase.

Payments are made in various ways:

- petty cash purchase (currently limited to $50);
- use of Australian Government Credit Card at point of sale; or
- on credit, through use of a Defence Purchase Order.

Most direct purchases are made using Defence Purchase Orders. Suppliers forward goods on receipt of the Order and subsequently lodge a claim for payment.

The three military services often make use of standing offer or period contracts for relatively low value, high volume, supplies, and can take advantage of Common Use Contracts arranged by DAS.

Some categories of equipment and stores, for example spare parts for vehicles or aircraft, are ordered directly from original equipment manufacturers (directly or through FMS), or their agents.

3.4.5 Procuring from overseas

Defence makes purchases from a variety of other countries, notably the United States and the United Kingdom. Defence can arrange foreign purchases from Australia, through Australian Embassy and High Commission staff or, in some cases, through brokers. Capital equipment procurements are subject to the selection and evaluation procedures described above.

Most overseas defence purchases have been sourced from the United States. They can be made directly from a US supplier or through the US Government under its Foreign Military Sales (FMS) arrangements. The US Department of Defense supplies FMS orders either from its own stocks or by procuring the items and services from its suppliers. FMS procurements require different contract development, acceptance and payment arrangements from those for direct Commonwealth commercial procurements.

Purchases from the USA are subject to the US Arms Export and Control Act. This Act limits the range of equipment different countries can purchase, and the countries to which other countries can sell US–sourced equipment.

4 ISSUES IN DEFENCE POLICY FOR PROCUREMENT

Value for money in defence procurement is best assured if Defence makes procurement decisions and recommendations on the basis of strategic considerations and available funding. The Government, however, should continue to place defence procurement in the wider context of its economic, social and environmental policies. Current procurement practices for major capital equipment need to be changed so that decisions about sourcing from Australia or from overseas are generally taken after any premiums are rigorously assessed.

The Commission is in broad agreement with current defence policy for industry as presented in the Government's *Strategic Review 1993* (see Section 3.2 and Appendix C). This chapter deals with some aspects of procurement policy which warrant further discussion either because they were of concern to participants, or because they relate to translating policy into practice.

Some participants argued that defence procurement should be used to promote economy-wide, industry development and export goals, rather than focus solely on defence considerations. This issue is discussed first.

Issues relating to premiums for Australian supply, compared with procuring from other countries, and factoring information about premiums into the decision making process are considered next.

The chapter then goes on to discuss several other policy issues: the role for longer-term supplier relationships; competition in defence procurement from government-owned enterprises; and issues relating to transparency and the provision of information to industry.

4.1 A framework for Defence decision making

Although there can be some overlap, the benefits and costs of defence procurement decisions can usefully be classified into two groups: the defence effects; and wider economic, social and environmental effects.

The first group covers changes in strategic defence capability, effects on support for the ADF (including support from industry), and the impact of decisions on the Defence budget. These benefits and costs directly influence Defence's

ability to fulfil its mission 'to promote the security of Australia, and to protect its people and its interests' (Defence 1993a, p. 1).

The second group covers effects such as impacts on production, employment, the structure of industry, and regional development.

4.1.1 Defence or economy-wide perspective

A number of participants believed that Defence should take economy-wide impacts into account when spending its budget. For instance, the Victorian Government commented that:

> Defence is spending taxpayers money. Hence its responsibilities extend beyond its special needs to include the net welfare of the nation to some degree. (Sub. 50, p. 21)

The Department of Commerce and Trade, Western Australia stated:

> [Defence] seeks to ensure that the nation maximises its level of defence for the portion of GDP set aside for that purpose. Unfortunately, the economic reality is now such that Defence can no longer be afforded such a luxury and should be required to play its part in efforts to improve the national economy from which it draws its funds ... The aim ... should be to achieve a procurement decision which is 'best value' for the nation rather than for Defence alone. (Sub. 47, p. 1)

According to the South Australian Government, Defence should 'accept its broader responsibilities for the nation's economic good as well as for security' (Sub. 53, p. 14).

The Automotive, Food, Metals and Engineering Union (AFMEU) rejected the proposition that defence procurement only be based on 'defence considerations', unless they are defined to relate 'not just to front-line military capability, but the overall ability of the nation to deal with any threat, be it military, political, industrial or trade' (Sub. D97, p. 2).

The *Strategic Review 1993* is ambivalent about the issue. Whereas it places defence policy for industry firmly in a defence strategic setting, it does comment (when discussing the support of existing capabilities) that 'normal commercial practice should be applied, except when premiums are warranted for specific **economic**, security or self-reliance purposes' (Defence 1993c, p. 55, emphasis added). The Review does not elaborate, however, on the meaning of 'economic' in this context.

In the Commission's view, Defence itself should be required to make purchasing decisions (and recommendations to the Government) only in a defence framework, albeit consistent with current government purchasing policy. But Defence, itself, should not be a prime instrument of industry policy. This means that, for example, Defence should not specify Australian industry

involvement just to provide extra work for Australian industry, although, in assessing value for money, Defence could regard Australian industry involvement favourably if that were to bring strategic or financial benefits to Defence (see Section 4.1.2).

The Commission considers that it is the Government's responsibility to assess the relative benefits and costs of the various policy options to pursue wider economic goals, such as employment. Thus, the Government needs to take the wider effects of defence procurement into account in terms of its economic, social and environmental policies. The opportunities to do so already exist. They include the consideration of Defence's annual budget submission, and the interdepartmental and ministerial processes leading to Government decisions on major capital equipment projects. Present arrangements thus enable procurement decisions to be taken in terms of what is 'best value' for the nation rather than for Defence alone.

4.1.2 Buying Australian

As the *Strategic Review 1993* indicates, there can be good strategic reasons for Defence buying Australian. For example, it could increase Australia's self-reliance by strengthening the capability and capacity of industry in support of the ADF.

Several participants also considered that buying Australian could bring benefits to Defence, to industry and to the economy generally. For example, as the MTIA Defence Manufacturers' Council indicated (Sub. D89, p. 3), defence work can give an Australian company access to new technology, which can assist in the development of the company and the skilling of its workforce. Some participants, including BTR Aerospace and the Industrial Supplies Office, suggested that encouragement to buy Australian might be embodied in a 'Buy Australia Act'. For example, BTR Aerospace argued that:

> There should be encouragement by Defence to purchase Australian designed and manufactured products and wherever possible to use Australian products ... perhaps we should consider a 'Buy Australia Act'. (Sub. 15, p. 2)

But no participant proposed Defence adopt a 'Buy Australian' policy regardless of the costs involved.

As well as recognising certain benefits, the *Strategic Review 1993* noted that buying Australian could have costs in some cases. At the defence level, for example, if premiums are involved, buying Australian can reduce funds available for other purchases. Any strategic advantage from the Australian purchase could be negated by the reduced scope for making other necessary procurements. From the wider perspective, buying Australian can impose costs

on particular industries and community groups, as well as bringing benefits (see Chapter 9).

Apart from the immediate benefits and costs, a policy of buying Australian where cost or price premiums are involved could mean Australian firms running against the Government's long-standing objective of becoming internationally competitive. As expressed most recently in *Working Nation*, 'the role of government is to provide a business environment in which individual firms can build on their competitive advantages, not to shelter them from competition' (p. 58).

The Commission considers that, in defence procurement, the benefits and costs — both strategic and economic — of specifying a requirement to buy Australian need careful assessment. For at least the major capital equipment acquisitions, this should be done on a case-by-case basis: Defence in its defence framework, and the Government in the broader framework.

These assessments should, as the Australian Electrical and Electronic Manufacturers' Association (AEEMA) indicated (Transcript, p. 584), take a longer-term view of defence strategic needs. They should also consider the 'linkage between procurement projects and the establishment, maintenance, or extension of strategic capabilities' (Sub. D72, p. 4): the Australian Opto Electronics Industry Network considered that no process is currently in place for doing so. Disney-Howe Associates considered that the use of 'properly structured cost benefit/effectiveness analyses' could be warranted in assisting Defence to resolve the 'complex issues that characterise Defence decision-making environments' (Sub. D62, p. 9).

The Commission came across some evidence that foreign goods would sometimes be preferred even where there were value-for-money Australian goods which fulfilled the required specifications. The Victorian Government indicated that a number of companies have claimed that in smaller procurements Australian involvement policies are only loosely observed, and that some supply officers find it easier to rely on FMS purchases than to locate an Australian supplier (Sub. 50, pp. 23–4). Similarly, the Defence Industries Council of Western Australia claimed that 'there is almost a cultural cringe about buying Australian products — no matter how good they are' (Sub. 45, p. 4).

In response to this problem, the Council considered that:

> In the interest of our national economy, the Department of Defence and the armed forces must be subjected to a policy which states that they must justify why they do not buy Australian products in favour of overseas products. (Sub. 45, p. 2)

And the AFMEU considered that 'a Buy Australian policy must be enforced, and the decision not to buy Australian be the subject of specific reporting' (Sub. D97, p. 3).

In the Commission's view, if an Australian product offers equal or better value for money than a foreign product, the Australian product should be preferred. Further, an Australian product could be preferred even if its price or through-life cost were higher than the import, if there were a strategic defence advantage from increased self-reliance.

The Commission does not agree that Defence must always justify why it does not buy Australian, as that could lead to delays in procurement and unnecessary additional costs. But sufficient information needs to be available to Australian firms about defence opportunities (see Section 4.5), to overseas bidders about Australian industry's capabilities (see Section 4.2.4), and to procurement officers about Australian products. This last consideration is partly the responsibility of Australian industry, though changes may need to be made to parts lists and electronic catalogues, for example, to ensure that suitable Australian goods and services are included. Defence is entering into memorandums of understanding with the various Industrial Supplies Offices, which should be able to provide useful information in this regard. A related issue is the provision of appropriate training to purchasing officers (see Chapter 8).

4.1.3 Industry development, technology transfer and export potential

Several participants argued that factors such as industry development, technology transfer and export potential should be taken into account when making defence procurement decisions. For instance, the Association of Australian Aerospace Industries (AAAI) argued that 'the success of defence procurement as a tool to encourage overseas companies to help in the building of Australia's industrial base', the 'possibility of future export orders' and the 'impact on technology acquisition' should be included (Sub. 14, p. 5).

The Business Members of the Defence Industry Committee also commented on technological development:

> There is also a need, requiring ... difficult judgment ... as to the extent to which, if any, defence procurement should bear any responsibility for assisting in local industry development in leading edge technologies. (Sub. 58, p. 4)

Many participants considered that export success or potential should be explicitly included by Defence in its procurement evaluation criteria. Hawker de Havilland, for instance, commented that:

> Both Government and Defence are fostering export growth. It follows therefore that a criterion for tender evaluation and selection should be the past performance of tenderers in exporting and the impact that the tender selection will have on future exports. (Sub. 40, p. 8)

An example of industry development gained through defence work is that of Transfield Shipbuilding. Through its involvement in the ANZAC ship project as prime contractor, this company has developed a range of capabilities including project management skills (see Section 9.2.2). As a result, Transfield is currently pursuing several export opportunities, including the possibility of a joint project to build offshore patrol vessels for the Malaysian Navy. Transfield considered that 'technology transfer, capability enhancements and exports are ... important factors in determining value for money' (Sub. D79, p. 1).

Although these indirect benefits tend to be a by-product rather than a direct aim of the procurement, they can have both defence and wider economic and social impacts. For instance, increased industry capability resulting from a particular procurement can itself bring strategic benefits to Defence and also, perhaps, heighten the competitiveness of Australian industry leading, in turn, to lower prices for Defence. Similarly, exports can have both a strategic and financial value for Defence. This is recognised in the *Strategic Review 1993* which says:

> Exports to South-East Asia and the South-West Pacific, in particular, can serve our objective of regional security, by strengthening our neighbours' security. At the same time, defence exports support our national capacity for defence. They are a valuable way of making local industry more efficient and of retaining industry capabilities of value to Defence. (Defence 1993c, p. 74)

Defence procurement can also have economy-wide spillovers: for example, industry and technological development can increase Australia's international competitiveness, and the enhancement of export potential can strengthen the overall economy.

The Commission considers that the strategic and financial benefits to Defence of factors such as industry development, technology transfer and export potential should be considered by Defence in making decisions. Whether this means that Defence should explicitly include export potential, for example, as an evaluation criterion in particular acquisitions is a matter for case-by-case decision, as such potential benefits may be long term and not necessarily closely related to particular acquisitions. A better approach could be to reach judgments about factors such as export potential and industry development potential in the final ranking process (also see Section 7.5). This is what happens in the UK where export prospects can be used to separate otherwise equally attractive bids.

It was stated in *Working Nation* that 'the Government's objective is to use its purchasing framework as an important element of industry development policy,

while also ensuring value for money for the Australian taxpayer' (p. 76). It would be entirely consistent with that approach for the Cabinet to continue to take into account any wider economic implications of major defence procurement proposals, including their impact on industry development, technology transfer and export potential. However, the Commission considers there is no justification for using defence procurement specifically to pursue such economy-wide goals. Value for money to Defence must remain the overriding consideration. The Canadian and US experience demonstrates the costs that can arise when this is not the case (see Appendix B).

4.2 Premiums for major capital equipment acquisitions

Government policy seeks to develop internationally competitive firms and industries. As *Working Nation* says, 'an open economy leaves no room for subsidies that prop up uncompetitive firms ...' (p. 58).

In the case of defence procurement, Government policy as expressed in the *Strategic Review 1993* recognises that there may be instances when paying premiums for Australian industry involvement could be justified for strategic defence reasons. But, even then, the policy is to avoid premiums as far as possible:

> While we are prepared to consider some premiums and other departures from commercial practice where there are strong strategic reasons for doing so, Australia's general strategy will be to avoid them as far as possible. (Defence 1993c, p. 71)

Some participants, for example British Aerospace Australia and the Australian Opto Electronics Industry Network, suggested that 'the issue is one of investment decisions, not premiums' (Sub. D72, p. 3). However, assessing industry involvement requires case-by-case analysis of strategic and financial factors. In undertaking such analysis, decision makers must have information about any Australian premium, whether it be on initial purchase price, through-life cost, or both.

4.2.1 What premiums are justified?

Strategic priority areas set out in the *Strategic Review 1993* largely relate to ongoing maintenance and support, adaptation, product development and systems integration in a wide range of areas. Professor Dibb assessed that paying 'high' premiums could (and should) be avoided in such first priority areas (see Box 3.2). Further, as the *Strategic Review 1993* notes, there is 'strong evidence' that Australian industry is internationally competitive in fields such as communications, intelligence and surveillance (p. 72).

With the exception of some categories of munitions, local manufacture per se does not fall into the high priority area of desirable industry capability specified by Dibb or in the *Strategic Review 1993*. Although Dibb suggested that the ability to build naval platforms in Australia is strategically important, he saw no strategic justification for paying a significant premium (he nominated a figure of 10 per cent) for this or other second order strategic priorities. As noted below, Transfield claimed that no premium would be necessary, on a through-life basis, for the ANZAC ships.

On the basis of those assessments, the Commission considers that Defence should be wary of paying any premium for Australian supply. Where premiums are not justified strategically, they should not be paid. And even where premiums could be justified strategically, they may well not be necessary.

This does not lessen the need to gather as much information as possible about the size of any possible premium, particularly where large expenditure is proposed for major capital equipment acquisitions. Such information serves a dual purpose: avoiding costly mistakes in the allocation of funds to different strategic priorities, and keeping Australian industry up to the mark.

4.2.2 Measuring premiums

Desirable as it is to have accurate information on premiums, there are several reasons why estimating them is seldom easy.

First, it is not always possible to compare like with like. Where broad Defence requirements are specified in tender documents, different tenderers may offer different solutions. Further, Defence requirements may differ in nature and quality from the cheapest overseas buy. Even were Australia to import, Defence might not want the off-the-shelf version, the one for which the price is easily known, but might want one with advanced features. Similarly, Defence might want its equipment tailored to Australian climatic conditions.

Second, relevant price data may not always exist. Foreign and Australian (whether Australian or foreign-owned) tenderers will only put in genuine bids if they are given the opportunity to do so, and they believe they have a genuine chance of winning the tender. If Defence or the Government closes off options early by indicating a preference for either foreign-sourced or local supply, for example by publicly favouring an Australian prime contractor or indicating expected levels of local content, estimating price premiums will become more difficult.

Third, the initial price premium and the corresponding cost premium on a through-life basis can differ considerably. Transfield Shipbuilding, for instance,

said that any small initial premium for Australian supply in the ANZAC ship project would be much more than offset by through-life savings (Sub. 10, p. 9). For sound decision making, information is required about both the initial premium (if any), and through-life costings, even though, as Transfield indicated, the 'emphasis must be on through-life costs' (Sub. D79, p. 1). Measuring through-life costs is not easy, either. Defence indicated that 'life-cycle costing is at an early stage of its development within Defence' (Sub. 29, p. 46).

4.2.3 Examples of past premiums

In its initial submission, Defence provided information about premiums for only three projects (see below). But it indicated that further information could be available:

> Defence Source Definition Committee minutes, tender evaluation documentation and records of individual projects will usually contain information on premiums. Commission staff can be given access to these confidential records, if required. (Sub. 29, p. 58)

Defence also stated (in relation to Tier One of the AII arrangements) that 'the cost of acquiring the capability totally from overseas would be known by the project. The difference would identify the premium, if any' (Sub. 59, p. 29).

Subsequent to the release of the Draft Report, Rear-Admiral (Ret'd) WJ Rourke (a former Chief of Navy Materiel) indicated that [in the early 1980s]:

> The costs of acquiring FFGs were well known and estimates were produced of the prospective man hours to build in Australia. It was concluded that additional FFGs could be built using the facilities at Williamstown Dockyard at not more than 10 to 15 per cent more than the US price. (Sub. D86, p. 1)

When the Commission approached Defence for additional information about premiums, however, it commented:

> the Department felt that the presentation of further premiums data may not provide much assistance to the Commission with its inquiry due to:
>
> - the lack of a common methodology within the Defence organisation for the calculation of premiums; and
> - the difficulty associated with the presentation of the underlying data which might be used to improve the comparability of premium calculations.
>
> These difficulties appear to inhibit any meaningful comparison of premiums in different Defence procurements or their comparison of premiums paid external to the Department. (Sub. 52, pp. 7–8)

At the initial public hearings, the Australian Submarine Corporation was not able to indicate the extent of any possible premium associated with the Collins

Class project, although it stated that Australian costs were competitive (Transcript, p. 159). As noted above, Transfield Shipbuilding claimed that any initial price premium for the ANZAC ships is small, and would be offset by savings on a through-life basis. However, rigorous estimates of premiums for the submarines and frigates have not been made. Certainly, that would have been difficult as each of those acquisitions contains uniquely Australian requirements. But early announcements by the Government that these projects would have Australian prime contractors and high levels of local content ruled out the possibility of overseas tender prices for comparison.

To the Commission's knowledge, the F/A-18 Hornet aircraft project, the Black Hawk helicopter project and the B707 Tanker project are the only major acquisitions where price premiums have been clearly assessed. In the F/A-18 case, estimates of premiums were made in advance of the acquisition program, and reassessed after it had been completed. The 1981 advance estimate of the price premium for assembly in Australia was 'about 14 per cent of the program cost or equivalent to the flyaway price of an additional 14 aircraft' (Defence 1994b, annex A, p. 2). A later review revised the estimate to 17 per cent of total acquisition costs (Defence 1994b, p. 8).

The size of the F/A-18 premium, and the estimate given by Rear-Admiral Rourke for the FFGs, illustrates the importance of having premium information available. Significant premiums on such large projects need to be balanced by strategic gains or through-life cost savings. Yet, based on the evidence available to it, the Commission concludes that in only very few major capital equipment projects have the nature and extent of premiums been rigorously and adequately assessed.

4.2.4 Premiums and local content levels

AEEMA supported early notification to industry of requirements for minimum levels of local content and for Australian prime contractors (Sub. D75, p. 3). Similarly, the MTIA Defence Manufacturers' Council said 'we want to know well in advance what AII levels are to be expected' (Sub. D89, p. 6). Transfield Shipbuilding considered that Australian prime contractors should be mandatory for major projects (Sub. D79, p. 3).

In regard to local industry involvement, the *Strategic Review 1993* indicates that:

> For all major new capabilities Defence will look to maximise local industry involvement, usually via the use of local prime contractors teaming, as necessary, with overseas suppliers of equipment and technology in order to secure best value for money. (p. 71)

However, the Review does not discuss why Australian prime contractors are to be so specified, although it indicates that there is strategic advantage from the development in Australian industry of knowledge and experience in project management and systems integration in the high technology areas of equipment acquisitions.

Further, the merits of minimum percentage levels of local content, and of target levels, are not canvassed in the Review, although they have been specified in at least some major capital equipment acquisitions. For example, a minimum level of local content of 50 per cent was set in Project Raven; a target of 45 per cent AII was set in the Australian light armoured vehicle project. In the coastal minehunter project, one of the 'non-priority industry objectives was to achieve a target level of at least 60 per cent local content' (Sub. D106, p. 1).

Notwithstanding industry requests and the Review's statements about the desirability of local industry involvement, the Commission considers that optimising Australian industry involvement requires sound estimates of premiums for Australian supply. Even where the product sought by the ADF has to be customised, estimates of premiums are desirable, so that the procurement decision can weigh up the additional costs against the likely additional benefits of Australian industry involvement. As noted above, it is very difficult to assess the extent of any premiums if requirements for Australian prime contractors and/or percentage levels of Australian content are specified before requests for tender go out. Indeed, as the *Strategic Review 1993* indicates, 'local manufacturers will not always be competitive' (p. 71).

Given the billions of dollars involved in defence procurement, the onus must rest with Defence to measure the extent of any likely premium, before the sourcing decision is made. Defence must justify the estimated additional costs against the strategic benefit. This would be facilitated if as few constraints as possible on product sourcing were included in tender documentation.

At the Draft Report public hearing, Defence agreed that specifying a particular level of local content as mandatory was inappropriate (Transcript, p. 522). However, it argued the merits of target percentage levels of Australian industry involvement:

> This approach is aimed at encouraging tenderers to vigorously pursue AII through the process of competition. Moreover, to withhold information on Defence's AII expectations from industry early in the procurement process may increase the cost of tendering and lead to some hostility from industry who may not have tendered if this knowledge were available to them earlier. (Sub. D74, p. 5)

In setting targets, Defence said it aims to nominate levels of AII which could be 'economically done in Australia' (Transcript, p. 539). The intention is to:

> force ... overseas firms, if they understand we have a strong preference for doing things in Australia, to actually come and talk to the Australian firms, find out what their capability is and use them where it's sensible. (Transcript, p. 529)

The NSW Government commented that:

> Suppliers, particularly those based overseas, will not automatically source local products no matter how competitively priced they are, due to strategic and other considerations. (Sub. D105, p. 2)

According to Defence, specifying target levels does not rule out tenderers offering lower levels (Transcript, p. 535). But Defence recognised that choosing a particular target level is not easy:

> you have ... to get it roughly right or you can force some unintended consequences ... So if we put the figure too high we are potentially excluding people. Conversely ... if we put the figure too low we're perhaps discouraging people from taking extra efforts and teaming and finding out what they could do to get a better local content and value added in Australia [at] potentially no premium. (Transcript, p. 538)

Target percentage levels of local content thus are aimed at ensuring that overseas firms make use of Australian capabilities where that does not involve a cost premium. This is consistent with the Commission's view that, if an Australian product offers equal or better value for money, the Australian product should be preferred (see Section 4.1.2). However, the Commission queries whether, in practice, targets can achieve their intended outcome.

Targets can act as de facto minimum levels of local content. Although Defence said that tenderers offering lower levels would not be ruled out, it recognised that setting targets too high could exclude some potential tenderers. It is difficult to see tenderers making offers with levels of local content greatly below those nominated by Defence. For example, if a target level of 60 per cent were set, would a tenderer be likely to offer (say) 40 per cent or zero local content? Thus, setting target levels could constrain tenderers' options to offer least-cost solutions, and restrict Defence's ability to estimate premium levels. Value for money could be reduced.

But there is a more fundamental problem with targets. As with the specification of minimum levels of local content, targets take the focus away from the strategic capabilities required in Australian industry and they focus instead on percentage levels of local content. Although increasing levels of AII can contribute to Australia's self-reliance, there is no strategic merit in any particular level of local content, per se.

The Commission recommends that neither minimum nor target levels of local content be specified in the procurement process. Nor, as a general

rule, should the mandatory use of Australian prime contractors be specified.

Removing constraints on the nationality of prime contractors and on local content levels from tender documentation would not prevent Defence from using Australian prime contractors when warranted by strategic needs, nor would it prevent Defence from establishing strategically important capabilities in Australian industry. However, these decisions would generally be made after proposals had been submitted, not before. Foreign companies could bid as prime contractors in their own right, as part of foreign consortia, or as part of consortia under Australian prime contractors (as foreign companies do now). Analysis of bids should indicate the levels of possible premiums, which could be set against the strategic advantages of sourcing in Australia.

The recommendation does not reduce the need for Defence to continue to provide information to overseas firms about the strategic capabilities available in Australian industry. Moreover, Defence should encourage overseas firms to assess the scope for cost-effective Australian industry involvement. And Defence should make it clear that Australian industry involvement will be preferred, where it offers equal or better value for money.

4.2.5 Ensuring value for money from premiums

From a Defence viewpoint, the payment of premiums for local supply could be justified if the strategic benefits gained from the development or maintenance of capabilities in Australian industry were to exceed the additional costs involved.

In one documented case, however, capabilities developed in Australian industry at considerable additional cost have been allowed to wither. The premium for Australian assembly of the F/A-18 Hornet aircraft (see Section 4.2.3) was justified partly on the basis that Australian industry would develop the necessary capability to service and maintain the plane, and that this capability in industry was strategically worthwhile. However, a recently published review of the F/A-18 program (Defence 1994b) shows that, although there have been some benefits to industry (see Section 5.1.2), these capabilities are not being fully utilised by the RAAF and, consequently, industry capabilities developed for Defence have been difficult to sustain.

The recommendations of the Review Team included that:

- for future programs, there is a need to develop a strategy to manage the transition between the original work and the follow on work to prevent the loss of capabilities; and

- requests for tender for Defence work should include advice on the expected level of support planned to be retained within Service establishments. (Defence 1994b, p. 9)

These proposals are consistent with the Commission's own conclusions set out in the previous section.

4.3 Longer-term supplier arrangements

The *Strategic Review 1993* indicated that:

> At times our strategic interests will call for a more interventionist role in the market-place, through ... the establishment of closer relationships with particular local suppliers. (Defence 1993c, p. 70)

The Price Report also supported such relationships between Defence and industry. It considered that there is a strong case for extending the use of longer-term supplier arrangements, particularly in support areas of 'higher strategic importance'. Price further recommended that the DSTO establish 'commercial strategic alliances' with firms to focus on areas of special interest to Defence.

There can be several different types of long-term relationship. In the case of major capital acquisitions or facilities procurement, tendering might be restricted to members of a short list or panel, previously selected on the basis of capabilities or past experience. For lower value equipment and stores, the relationship might involve extended contracts with a particular supplier or number of suppliers, with periodic retendering. Not all long-term relationships would necessarily involve the supply of goods or services to Defence. The main purpose of some might be the exchange of information and ideas, for example as in the current long-term agreement between Vision Systems, British Aerospace Australia, AWA Defence Industries and the DSTO. The three companies comprise the initial membership of a National Industry Extension Service (NIES) network based on opto electronic technology. The network is linked to the DSTO by a strategic alliance for cooperation in the area of opto electronics (Sub. D72, p. 1).

According to Price, longer-term supplier agreements would not imply a move from 'fair and open competition', but would:

- improve Defence knowledge of companies' capabilities;
- enable suppliers to develop a better understanding of Defence requirements;
- facilitate increased company investment by reducing risk;
- reduce transaction costs in procurement; and

- minimise the difficulties presented by Defence work from discontinuity of demand, and the highly specialised nature of the products sought. (Defence 1992a, p. 22)

Several participants also commented on the merits of long-term relationships. Defence, for example, considered that the proposed systems integration panel:

> could reduce our transaction costs and allow a smaller number of companies to build up a better knowledge of us and allow us to get in fact better value for money in the work they actually do. (Transcript, p. 476)

Siemens Plessey Electronic Systems expressed concern about the use of too many suppliers:

> [In] the electronics sector there are over ten reputable companies in a market with sales of $360m odd. The assumption is: 'the fiercer the competition the lower the prices'. The effect of it is that few of them achieve critical volume ... (Sub. 1, p. 4)

Techway (Sub. 11, pp. 3–4) stated that less frequent tendering would provide a more stable environment in which firms would be willing to undertake necessary capital investments, and would also reduce tendering costs.

The MTIA Defence Manufacturers' Council also argued, in a 1992 submission to the House of Representatives inquiry into government purchasing policies, that frequent tendering was inimical to low costs:

> The Commonwealth cyclical purchasing programs are not conducive to the development of long term customer and supplier relationships. Competitive bidding on an annual basis not only increases prices through increased administrative effort and recurring start up costs but also reduces local competitiveness through short production runs and, often, frequent changes in suppliers. (Sub. 36, attachment, p. 24)

The major issue in long-term relationships is how to ensure their benefits without incurring excessive costs through loss of competition. Particular questions concern how many suppliers should be used, and how frequently tendering should take place. Australian Defence Industries, for example, recognised a danger in Defence favouring particular contractors:

> There is a need to avoid the danger of governments consciously or unconsciously favouring the members of a small select club of companies ... Otherwise, new entrants, and particularly smaller companies, will be disadvantaged severely, or locked out, national efficiency will suffer, and Defence will be saddled with a privileged but second-class defence industrial base. (Sub. 33, p. 6)

Defence (Transcript, p. 478) also seems to appreciate the potential barriers facing new entrants, as firms with long-term relationships with Defence get an edge on firms in a less privileged position. Defence informed the Commission that the proposed systems integration panel, for example, would consist of between three and five suppliers, and that competition to get on panels would occur once every three to four years (Transcript, p. 478).

There seems to be no doubt that, at least for major capital equipment procurements, the calling of public tenders is required to ensure best value for money. Neither the prime contractor for the ANZAC ship project nor the prime contractor for the Collins Class submarine project would have been selected, for example, if tenders had been restricted to firms with previously demonstrated capabilities. However, as the AAAI considered, establishing longer-term arrangements and the calling of public tenders may not be mutually exclusive (Sub. D85, p. 2). This could be the case, for example, if those arrangements focus on the exchange of information and ideas.

For other than major capital equipment projects, the use of extended term contracts and/or restricted panels could be more feasible, as competitive pressures could be more easily maintained. Period contracts are frequently used by the Services for lower value equipment and stores. Defence also currently uses panels for some information technology and some facilities procurements, and is considering increasing their use.

If a panel is used then, during the period of the panel, tenders for supply are called only from members of the panel. But there is periodic competition for listing on the panel. Methods such as fixed-price contracting and benchmarking, could be used to keep suppliers competitive between listing rounds. An alternative is an open form of panel, where any firm can be added to the panel if it satisfies financial and product criteria.

An alternative to a panel with strict contractual arrangement is the less formal panel system commonly used in industry. Siemens Plessey Electronic Systems (Transcript, pp. 374–5), for example, commented that it operates a ‘tacit’ panel system for its procurements. It promotes efficiency by comparing prices paid with international benchmarks. If performance is inadequate, it will change supplier almost immediately.

In summary, there can be both strategic and financial benefits from longer-term supplier arrangements. However, care must be taken to ensure that such arrangements do not result in barriers to entry which reduce the incentives for companies to perform. There is a trade-off to be made, with the point of balance depending on the type of acquisition. In general, longer-term arrangements seem less likely to offer value for money for major capital equipment acquisitions than they do for minor capital acquisitions, and for acquisitions of lower value equipment and stores. For major capital acquisitions, many of the potential benefits of longer-term arrangements, without the costs, could be obtained by quick and strict shortlisting — see Chapter 7.

There is also a trade-off between the number of firms listed on a panel and the frequency of competition for listing on the panel: in general, the smaller the number listed, the more frequent should be the listing process.

4.4 Government-owned enterprises

The 1987 White Paper announced the Government's intention that 'unless there are compelling reason to the contrary, defence work will be allocated on a competitive basis' (Defence 1987, p. 82). The previous policy of establishing important defence capabilities in industry and allocating them work exclusively:

> has established sole sources, which have subsequently lapsed into the poor performance and high costs that often characterise monopolies. (Defence 1987, p. 82)

Subsequently, Defence divested itself of a direct role in the production of capital equipment and consumables, with the privatisation of Williamstown Dockyard and the establishment of AeroSpace Technologies of Australia (ASTA) and Australian Defence Industries (ADI) in place of the former Office of Defence Production.

On a day-to-day basis, ASTA and ADI operate independently of the Government. They compete against other firms for defence work, including the supply of capital equipment and for CSP contracts. Australian Construction Services (ACS) also competes for defence work associated with the construction and maintenance of facilities, even though it is still operated as a departmental activity.

Some inquiry participants queried whether ASTA, ADI and the ACS received an unfair advantage when competing for defence work.

Hawker Pacific, for example, did not believe that ASTA competed on an equal footing:

> While not in a position to provide proof, it is a widely held industry belief that ASTA have enjoyed subsidies of a welfare nature not available to its competitors. GBEs [Government Business Enterprises] by their nature do not have the same profit incentives as a commercial organisation. They can engage in predatory pricing without answering to shareholders and any losses are made up by the taxpayer, including competitive companies. GBEs also have a significant advantage of possessing valuable assets previously paid for by the Government/Taxpayers. (Sub. 18, section 5.6)

For its part, ASTA contended that it enjoyed no competitive advantage over Australian private sector companies:

> ASTA has been formed as a Limited Company and operates under the same conditions as any other Australian company (eg the corporations law). Limitations however exist in shareholder willingness to further invest in the company. In addition, Government regulations continue to be imposed on GBEs which generally are more restrictive than that imposed by shareholders in private companies. (Sub. 19, p. 10)

Starkstrom Marine considered that the transitional 5-year arrangements for ADI gives that company an advantage:

> [ADI] is getting X amount of work on a platter, a stable base, [they have] got the competitive advantage against us. They can discount their labour rate; they can discount their facilities value, because over a period of 5 years it will balance itself out. (Transcript, p. 229)

For its part, ADI considered that it does not enjoy any advantage because of its ownership:

> In fact ADI sees that it is somewhat disadvantaged because of its reduced management autonomy and the conflict of interest in the owner also being the customer. Indeed, Defence has to work harder to award contracts to ADI than to other companies. Further, the market place assumes, incorrectly, that a government-owned company operates bureaucratically like a government department. (Sub. 33, p. 23)

Concern was expressed by Halpern Glick Maunsell that the ACS receives an unfair competitive advantage in several ways, for example: offices are provided at HMAS Stirling and RAAF Base Pearce rent free; equipment is bought on a sales tax free basis; it is not required to enter into a contract when awarded a Defence project, because the Commonwealth is legally unable to have a contract with itself; it is not required to carry professional indemnity insurance; and losses are covered by drawing from Consolidated Revenue.

In response, DAS contended that its businesses, such as the ACS, 'compete with the private sector on a level playing field, and that its operating arrangements do not confer on it any unfair advantage' (Sub. D94, p. 8). The Joint Committee of Public Accounts is currently inquiring into the commercialisation of public sector operations.

The Commission's views

The Commission strongly supports the Government's intention that defence work be allocated on a competitive basis. For this to occur, government-owned trading enterprises such as ASTA, ADI and the ACS need to be required to operate in as similar a manner as possible to private enterprise generally.

Indeed, to this end, the Government implements a set of controls on 'Accountability and Ministerial Oversight Arrangements for Commonwealth Government Trading Enterprises'. These controls cover several matters including financial targets; reporting requirements; information to be included in corporate plans; and arrangements for board selection.

The arrangements apply to ASTA and ADI, but not to the ACS. In addition, ADI and ASTA have individual agreements with the Government about specific operational and phasing arrangements.

The situation with ADI, in particular, is complicated by a number of additional arrangements. Five-year supply contracts have been negotiated with ADI to

cover some products and services formerly provided by the Office Of Defence Production. These arrangements are transitional, and ADI will have to compete for what was its traditional Defence business after they expire in June 1995.

In view of the transitional arrangements with ASTA and ADI, there is insufficient evidence to establish that they compete unfairly for defence work. However, there is potential for unfair competition from them, and from the ACS also.

The Government has announced that ASTA will be privatised, and studies are ongoing on the possible partial or full privatisation of ADI. The Commission has not examined the operations of ASTA and ADI in detail but it is concerned that, for as long as they remain under government ownership, they should compete fairly with commercial firms for defence business. Similarly, the Commission is concerned that the ACS compete fairly.

4.5 Transparency and information

Several participants criticised what they see as continuing imprecision in defence policy for industry. For example, AEEMA called on Defence to identify and prioritise industry capabilities by strategic importance:

> there needs to be a much closer link between the operational and strategic requirements of the Defence Forces (including ADF force structure) and the nature of industry support ...
>
> In particular, Defence needs to establish a framework for regularly reviewing, identifying and prioritising those industry capabilities of greatest strategic importance. The key to investment by industry in sustainable capabilities will be confidence that Defence intends to develop Australian-based capabilities. (Sub. 22, p. 9)

The South Australian Government was concerned that 'little progress' has been made in setting out a clear prescription on the future strategic relevance of defence industry (Sub. 53. p. 16).

It was also suggested that industry should be more involved in the planning and acquisition stages of defence procurement. ASTA considered:

> Much of the Defence planning and acquisition process excludes industry, thereby inhibiting the adoption of long-term planning by industry, particularly in investing and participating in the development of innovative defence products and services. (Sub. 19, p. 4)

The Commission notes that the *Strategic Review 1993* has provided additional information about defence priorities for industry. The Review lists circumstances most likely to favour a sole or major role for local industry (see Section 3.2), and also lists key capabilities for industry support (see Box 3.3).

It is also encouraging that Defence already provides, or is developing, a number of other means of providing information to industry. These include the Pink, Yellow and Green Books, which indicate future Defence expenditure on major capital acquisitions, minor capital acquisitions, and facilities, respectively. A series of sectoral studies under the auspices of the Defence Industry Committee are under way. Conferences are organised to inform industry about Defence's planned acquisitions, and about its activities in the export arena. As well, there are Defence/industry interchanges of personnel.

Several participants, including the Department of Commerce and Trade of Western Australia, AEEMA and the AAAI, expressed disappointment that Defence is not to be required to prepare the Industry Impact Statements announced by the Government in *Working Nation.* Such statements are intended to serve two main purposes: to identify possible opportunities for industry development prior to a major contract going to tender; and to provide a basis on which the relative merits of the industry development component of individual bids can be made (News Release 74/94, p. 3 of attached booklet).

In the Commission's view, the Defence documentation mentioned above serves the first purpose. And the second is met by the AII guidelines set out by Defence for particular acquisitions, together with the tender documentation itself. Defence already fulfils the purposes of industry impact statement through 'its existing well developed and structured processes' (*Working Nation* 1994a, p. 206).

Since the Price Report, in its submission to this inquiry and in the *Strategic Review 1993*, Defence has gone a considerable way to prioritise and announce its requirements for support from Australian industry. It is not possible, in the Commission's view, to be completely prescriptive in advance as to industry priorities, or to levels of justifiable premiums for local content.

Defence is currently examining how to involve industry earlier in the acquisition process of particular procurements. This would enable Defence to have more opportunity to align its requirements to commercial availability, and industry would have the opportunity to influence what Defence buys. It would also help ensure that capabilities available from Australian industry are not overlooked by Defence.

4.6 Summary

The Commission considers that, within the constraints of current Commonwealth purchasing policy, Defence should be required to base its procurement decisions, and recommendations to the Government, on defence

considerations only. However, to ensure that procurement decisions offer best value for the nation, the Government should continue to take wider effects into account in terms of its economic, social and environmental policies.

If an Australian product offers equal or better value for money than a foreign product, the Australian product should be preferred. Action needs to be taken to provide procurement officers with comprehensive and reliable information about suitable Australian products.

In making its decisions and recommendations, Defence should take account of the possible strategic and financial benefits to it of industry development, technology transfer and export potential generated through buying Australian. And the Government should take any wider economic implications of such factors into account. However, the Commission considers there is no justification for using defence procurement specifically to pursue economy-wide goals such as industry development, technology transfer or export development.

While recognising the advantages of Australian supply, the Commission agrees that defence procurement policy should be to avoid premiums wherever possible. Where premiums are not justified strategically, they should not be paid. And even where premiums could be justified strategically, they may well not be necessary, because Australian industry in many instances is internationally competitive.

In the past, the extent of possible premiums has not been rigorously assessed, possibly because of an emphasis on expected levels of local content and Australian prime contractors. **In future, neither minimum nor target percentage levels of local content should be specified in the procurement process. Nor, as a general rule, should the mandatory use of Australian prime contractors be specified.** Such a move away from current practice would help to ensure that Defence does not inadvertently pay a premium and that, if and when it does pay a premium, it can be justified in strategic terms.

Removing constraints on the nationality of the prime contractor and on local content levels would not prevent Defence from using Australian prime contractors when warranted by strategic needs, nor would it prevent Defence from establishing strategically important capabilities in Australian industry. But it would allow decisions about sourcing to be better informed.

Defence should continue to provide information to overseas firms about the strategic capabilities available in Australian industry. Moreover, Defence should encourage overseas firms to assess the scope for cost-effective Australian industry involvement. And Defence should make it clear that Australian industry involvement will be preferred, where it offers equal or better value for money.

Longer-term supplier arrangements between Defence and particular firms offer a number of strategic and financial advantages. However, care must be taken to ensure that the arrangements do not stifle healthy competition and so be to the financial disadvantage of Defence in the long term. For major capital equipment procurements, the calling of public tenders is required to ensure best value for money.

5 ASSESSMENT OF PROGRAMS FOR INDUSTRY

The Australian Industry Involvement guidelines confuse decision making and need to be extensively revised. The Defence Industry Development Program should be terminated: depending on their nature, particular proposals for development expenditure should be assessed and funded under either the capital equipment program or the DSTO program. There are strategic and commercial reasons for Defence to support Australian exporters, and the new Defence Export Program should be evaluated in 1996.

This chapter assesses the AII, DID, DRSC and the DEP programs, described in Chapter 3, against the general conclusions about procurement policy issues reached in Chapter 4. The CSP is examined in Chapter 6.

5.1 Australian Industry Involvement program

The AII program sets out guidelines for Australian (that is, ANZ) industry involvement in defence procurement. The guidelines are still in the process of evolution following the 1992 Price Report, and changes to defence offsets. Two sets of guidelines have since been published: the 'Revised Guidelines' in September 1993, and the 'Interim Advice' in June 1994. Participants' comments on the AII program concentrated on the offsets arrangements.

The latest guidelines define two elements: Local Content which refers to value added by Australian and New Zealand industry; and Defence Offsets which refers to work directed to Australian industry as a result of a foreign firm receiving a contract. The earlier guidelines defined the term Contract Specified Work to refer to work that Defence specifies should be undertaken in Australia, but this term is not used in the Interim Advice.

On top of this, a two-tier arrangement applies. In the Revised Guidelines, Tier One specifies the minimum level of Australian industry involvement required by Defence, whereas Tier Two allows firms to offer greater levels of local content. In the Interim Advice, Tier 1 indicates industry activities which Defence considers 'highly important' in supporting particular strategic capabilities; Tier 2 indicates areas on which Defence would prefer tenderers to focus when developing the overall AII program with the objective of broadening the industrial support base in key areas. An overall target level of AII (Tier 1 and

Tier 2) in terms of a percentage of the contract price will also be advised, according to the Interim Advice.

5.1.1 Local content

Guidelines for the AII program are in a state of confusion. Neither their aims, nor the mechanisms to be employed to achieve those aims, are clear. Further, the guidelines feature minimum and target levels of local content. As discussed in Chapter 4, however, the specification of such levels of local content in the procurement process makes more difficult the assessment of premiums for Australian industry involvement, and could lead to costly mistakes.

The AII guidelines need to be extensively revised, and refocused on strategic capabilities required by Defence instead of on local content. Rather than specify minimum or target levels of local content, they should make clear what particular capabilities, if any, in Australian industry are essential to, or desirable in, a project and for its through-life support. Existing and previous concepts — Tier One, Tier Two, Local Content, Contract Specified Work, as well as Defence Offsets (see below) — should be discontinued.

The Commission recommends that the AII guidelines be revised to have only two components. The first component (Priority One) would specify the capabilities in Australian industry that Defence considers essential to a project and its through-life support. The second component (Priority Two) would indicate the capabilities in Australian industry that Defence considers desirable, but not essential.

Appendix D to this report contains the Commission's suggestions as to how the AII guidelines should be modified to accord with the Commission's findings and recommendations.

5.1.2 Defence offsets

Changes made to defence offsets arrangements following the Price Report attracted considerable comment from participants. Their main concerns were the removal of compulsory thresholds for offsets obligations, and the relegation of defence offsets to a 'measure of last resort'.

Under the recent changes, defence offsets will be more tightly focused to meet specific industry objectives relating to specific projects. They might be sought when 'acceptable local content cannot be achieved for the expected level of AII' of a project (Defence 1994a, p. 21). For example, Defence indicated that for the

night observation and surveillance project (NINOX), offsets could be sought against the imported component:

> because of the sophistication of the equipment and limited competition in acquisition, most of it may need to be imported and offsets may be required to achieve some of the industry objectives. (Offsets could be appropriate in this case as local content is likely to be minimal.) (Sub. 59, p. 30)

Many participants considered offsets are valuable for Australian industry. Normalair–Garrett Australia, for example, said:

> NGA's experience is that offsets are an extremely cost effective way of encouraging AII provided they are discharged. In our view, offsets are not a matter of last resort and should be available on every significant project in a buyer's market. (Sub. 13, p. 6)

Defence offsets were seen as capable of providing at least six important benefits to Australian firms:

- ongoing work after the initial procurement has stopped;
- technology transfer from overseas;
- beneficial changes in workplace and management skills;
- improvements in marketing skills;
- export market opportunities; and
- local involvement in international research and development projects.

Several participants pointed to the successes of the previous defence offsets arrangements, particularly in the aerospace sector. For example, the Victorian Government commented:

> Through the F/A-18 project ASTA and Hawker de Havilland have been able to develop significant capability in composite technologies and other areas which they have been able to market overseas in civil aerospace markets. (Sub. 50, p. 29)

And the Western Australian Department of Commerce and Trade referred to the success of WA Speciality Alloys engendered through offsets arrangements (Sub. 47, annex A).

It was argued that Defence should use whatever leverage it has in negotiating procurement contracts. AeroSpace Technologies of Australia, for example, commented that:

> Australia is a significant buyer of Defence equipment, being ranked 17th as a spender on defence equipment. Defence therefore has available a significant leverage position in the market. The current policy to dismiss the use of offsets however limits the potential for Australian industry to negotiate a strong position with overseas companies owning, or with access to, the technology required by Defence. (Sub. 19, p. 8)

Some participants called for 'partnership for development' programs for defence procurement. In government civilian procurement, such programs have

replaced offsets programs, and operate particularly in the area of information technology.

Thomson Sintra Pacific considered that 'an approach like the Partnership for Development in the information industry would be a lot more effective' than offsets (Sub. 35, p. 9). The Australian Electrical and Electronic Manufacturers' Association (AEEMA) supported the extension of the partnership concept to defence purchasing 'to identify as preferred suppliers those firms who have given commitments in areas such as efficient local manufacture, innovation and exports' (Sub. 22, p. 9).

In supporting offsets programs as a principle of defence procurement, the Australian Food, Metals, and Engineering Union commented that 'to propose ... that overseas firms would offer intellectual property, etc., without an offsets requirement, is naive in the extreme' (Sub. D97, p. 5).

Implicit in the Union's comment, however, is the belief that offsets can be required without increasing Defence's costs of procurement. But not all participants considered that offsets or similar arrangements could operate without cost. For instance, Rockwell Systems Australia asked:

> how does one claim, for example, maintenance training as an offset without someone somewhere paying for the time and instructional effort associated with that training? Ultimately there is a cost and, obviously, contractors will try to ensure they don't carry that burden. (Sub. 25, p. 4)

The Commission supports the move away from compulsory offsets arrangements, and considers that the term Defence Offsets should be no longer used. But there can be cases, such as NINOX, where Defence wishes to obtain such elements as technology transfer to Australian industry, intellectual property rights, or marketing rights, as part of a procurement project. Such elements should be sought for the benefits they bring to Defence, not just because 'acceptable' local content cannot be achieved, or local content is likely to be minimal. Under the Commission's proposals, such elements could be included in tender documentation and, if appropriate, specified in AII Priority One or Priority Two. Australian firms would then need to obtain the required technology or access to intellectual property, for example.

Further, under the Commission's proposals, there would be nothing to prevent foreign firms from offering to transfer technology to Australia, or to provide intellectual property, for example, even if there were no requirement to do so. However, any additional costs would need to be made transparent to Defence.

5.2 Defence Industry Development program

The DID program provides to local industry some $10–15 million annually to 'develop local industry capabilities to meet long-term Defence requirements that cannot be better developed by other areas of Defence' (Sub. 29, p. 21). Past expenditure has been predominantly in areas such as communications, electro optics, information technology and underwater acoustics, and has been highly concentrated among a few firms, notably AWA Defence Industries.

5.2.1 Is the program successful?

An extensive review of the program undertaken as part of the 1992 Price Report found that:

> the DID program has been a valuable means of developing industry capabilities and has led to local firms being able to supply a range of important products and services to the ADF. (Defence 1992a, p. 31)

In their submissions, Defence and other participants listed a number of projects where benefits to Defence have been achieved through DID funding. Defence classified the benefits into three areas:

- industry capability benefits from the expected increased ability of local industry to provide products and services some time in the future;
- task benefits which accrue when the development tasks are useful in themselves; and
- commercial benefits which arise from associated intellectual property and sales of technology or related products and services. (Sub. 29, p. 61)

However, the success of a program such as DID should not be assessed only on whether the benefits of the program exceed the costs, but also on whether the program funds could have been better spent. This is difficult to judge because the strategic benefits from DID expenditure are difficult to quantify. As Defence commented:

> It is probably not possible to provide a meaningful quantitative estimate of the benefits that have been achieved by DID. Many of the benefits to Defence of DID supported industry capability are extremely difficult to measure. (Sub. 29, p. 63)

Even so, there needs to be some evaluation of the strategic merits of setting moneys aside for the DID program rather than allocating them to other areas of Defence such as mainstream procurement or the DSTO.

5.2.2 Clarifying DID's role

The 1992 DID review endeavoured to clarify the role of the DID program in the development of industry capabilities in Australia. However, there is still potential for overlap with capabilities obtained through procurement of equipment, with capabilities established within the three Services, and with the work of the DSTO, particularly in R & D.

Comments by participants on the appropriate role of the DID program focused on two broad aspects: the merits of DID projects as precursors to capital equipment acquisition; and the merits of DID in developing generic strategic technologies and capabilities.

The Association of Australian Aerospace Industries (AAAI) and British Aerospace Australia commented on the first aspect. The AAAI considered that the role of DID should be to 'pave the way' to enable maximum benefit to be obtained from AII programs (Sub. 14, p. 11). Similarly, British Aerospace Australia commented that 'given that a decision is taken to support a [DID] program, the ADF must commit to purchasing the product when it is developed' (Sub. D76, p. 4).

In regard to the second aspect, AEEMA commented that 'DID should be directed to real predicated defence requirements so as to allow the cultivation of generic technologies' (Sub. 22, p. 11). According to the Australian Opto Electronics Industry Network, DID should be 'concerned with a continuing relationship with industry as a partner in achieving self-reliance' (Sub. D72, p. 5). And Vision Abell considered 'Defence should treat DID as an investment in growing capability in strategic technologies' (Sub. D84, p. 3).

Under present DID arrangements, where funding proposals require a Service sponsor, there could be scope for lower priority projects (which the individual Services or the DSTO are not prepared to fund themselves) being pushed into the DID program.

Another problem is whether sufficient attention is given to the maintenance over time of industry capabilities developed or established under DID. For instance, many DID projects receive only small funding for a short time, yet DID is directed at longer-term needs. Defence commented that 'little past effort has been directed towards examining the longer term impacts of DID tasks' (Sub. 29, p. 63), but added that project review is now required three years after project completion.

If DID were to continue, its lack of focus needs to be addressed. Defence should clearly specify the characteristics of proposals eligible for funding under the program, including their strategic rationale. The Commission notes that DID is currently subject to an internal Defence review.

5.2.3 Funding

Some participants considered the present level of funding is insufficient. Australian Defence Industries said that 'the level of funding of the DID program is paltry' (Sub. 33, p. 21). AEEMA thought that 'funding is too low to be effective' (Sub. 22, p. 11). And Morris Productions' recommendation that 'DID funding be restructured to provide a source of development finance at world competitive real interest rates' (Sub. 20, p. 14) implies a big increase in funding for DID.

In the Commission's view, there is no rigorous way of arriving in advance at the appropriate funding for a program such as DID. As indicated below, the Commission considers that the benefits of particular proposals, currently arising under the DID program, should be assessed in a broader strategic setting. The level of funding for a program such as DID can only be estimated after, not before, the merits of particular proposals are considered.

5.2.4 Should DID be a separate program?

The Price Report considered that DID should continue as a separate Defence program. It found that there were:

> important circumstances where Defence's mainstream procurement practices were not as well suited to meeting Defence's requirements as a specific program directed towards the development of priority capabilities in local industry. (Defence 1992a, p. 32)

The Commission recognises the useful role this program plays. But continuing DID as a separately funded program with its own budget means that the merits of possible DID projects would continue to be assessed in a rather limited strategic setting. Indeed, there is some evidence that this has caused concern.

The Defence Inspector-General's review of 1991 'found little evidence of a systematic analysis of project proposals to ascertain their expected direct contribution to defence self-reliance' (Defence 1991b, p. 5-8). This had 'resulted in the development of a number of capabilities for which there is no manifest Defence requirement' (Defence 1991b, p. 5-9). Defence itself commented that 'little past effort has been directed towards examining the longer term impact of DID tasks' (Sub. 29, p. 63). And some other participants considered there was a need for greater strategic focus. British Aerospace Australia, for example, said:

> the management of the program requires strengthening, and the focus of the program should be more targeted to the strategic priorities of Defence. (Sub 23, p. 15)

So it seems that, from a strategic point of view, there would be considerable merit in considering DID proposals in a broader context than at present.

But do the particular characteristics of DID projects justify a separate program? Defence commented that there are significant differences between development programs and mainstream procurement:

> the major difference between the purchase of a development task and other Defence purchases is the timing and uncertainty of the expected increase in Defence performance ... Development is a long-term, high risk, activity with uncertain benefits and costs. (Sub. 29, p. 60)

Set against this is the relatively small funding requirements of DID projects. Evaluation of capital equipment proposals seems just as difficult, risky, and uncertain, if not more so, as evaluation of relatively small development proposals.

The Commission sees no justification in DID continuing as a separate program with its own budget, and its associated high administrative costs (over 25 people on a fulltime equivalent basis). Discontinuing DID as a separate program would not, of course, rule out projects of the type currently funded under the program. But they would be assessed in a broader framework, and funded differently.

In its Draft Report, the Commission proposed that such proposals be assessed within the minor capital equipment program. Several participants considered that would not be appropriate. British Aerospace Australia, for instance, indicated that there is little provision for considering the strategic requirements of the ADF in the minors program (Sub. D76, p. 4). And Defence said that as most minor capital spending is undertaken by the Services it is mostly directed at meeting their immediate needs and not to the development of Australian industry capabilities (Sub. D74, p. 5).

The Commission accepts that assessing DID-type proposals under the minors program could lead to a loss of strategic focus, rather than a gain. It now suggests the following approach: proposals to develop industry capabilities in advance of specific planned equipment acquisitions should be assessed and funded under the capital equipment program; and proposals directed at the development of generic technologies and industry capabilities should be assessed and funded under the DSTO program. The latter point is consistent with the Price Report's conclusions that 'DSTO's activities are necessarily directed towards the strategic priorities for defence self-reliance' and that 'DSTO will remain critical to the development and advancement of defence and defence-related technology' (Defence 1992a, p. 28).

The Commission recommends that the DID program be discontinued. Proposals of the type currently considered under it should be assessed and funded under the capital equipment and DSTO programs.

5.3 Defence Required Support Capability program

Although the Capital Equipment Procurement Manual envisages DRSC as a widely available program, DRSC payments have ever only been made to Australian Defence Industries (ADI). Since it was established, ADI has received annual payments ranging between about $14 million and $20 million to maintain certain capabilities in munitions manufacturing (eg small arms manufacture at Lithgow) and ship repair (eg the Captain Cook dock at Garden Island). These payments are to maintain capabilities in Australia for which there are little or no commercial markets and little utilisation in peacetime. The level and duration of DRSC payments to ADI are essentially set by negotiation between the company and Defence, based on the company's costs in maintaining the required capabilities.

Defence stated that it would be very unlikely for DRSC funding to be provided to other firms 'given the move towards more commercially oriented arrangements in recent years' (Sub. 59, p. 17). For this reason, the Commission suggests that it is misleading to continue including the DRSC program in the Capital Equipment Procurement Manual as a generally available program.

In a 1991 review, the Defence Inspector-General commented that 'there appears a need to give further consideration to the policy concerning the future of the DRSC concept and its relationship to other financial premiums paid for local sourcing' (Defence 1991b, p. 5-12). According to Defence, there are no other forms of 'direct subsidy or assistance' to ADI (Sub. 59, p. 17), although the Commission notes that a 20–year agreement with ADI has been reached for the supply of munitions from its new Benalla plant.

In its Draft Report the Commission proposed that, from the expiry of the current DRSCs in June 1995, the capabilities currently provided by ADI under those arrangements be opened up to public tender. The Commission commented that although there may be no better way of maintaining the capabilities currently provided by ADI, present arrangements locked Defence into payments to one particular company over an extended period. The Commission's proposal was intended at least to allow other companies the option of tendering if they considered they could provide the required capabilities to Defence. Defence would then be more easily able to assess the benefits and costs of the various alternatives, and which offered best value for money.

In response, some participants considered that the Commission's proposal was not feasible. ADI stated that 'DRSC program capabilities are unique. To compete them is to duplicate them which, inevitably, will result in greater cost to the Commonwealth' (Sub. D60, p. 1). And Defence commented that:

> A very strong, practical, impediment to offering DRSCs to public tender is the fact that these capabilities are either interwoven into the fabric of ADI, or are reflected in the highly specialised knowledge and skills which reside in individuals employed by ADI. If the Captain Cook dry dock at Garden Island is taken as an example, as it is not a stand alone facility, there is no cost or operational benefit for Defence in offering the dock to an operator other than the one which operates Garden Island Dockyard. Likewise, the small arms manufacturing line at the ADI Lithgow facility cannot be separated out from ADI's day-to-day operations. (Sub. D74, pp. 6–7)

In the Commission's view, these comments do not lessen the merit of the principle underlying its Draft Report proposal. The comments certainly indicate that ADI could be at a substantial advantage in a tender process, but do not rule out the prospect of another firm being able to offer a required capability at better value for money. This would be so especially if advance notice were given of an intention to go to public tender, and other firms were given the same access to Commonwealth facilities as ADI.

However, the Commission will not continue with its Draft Report proposal. In developing that proposal, the Commission believed that there were 22 separate DRSCs with a continuing total cost to Defence of some $12-20 million annually. It has since been informed that many DRSCs have been terminated and that only about 7 will continue beyond 1996. As any benefits from new arrangements at this time would be minimal, the Commission has not recommended any change.

5.4 Defence Export Program

The DEP was established during 1992, following the Price Report, to help industry to export through marketing and promotion assistance. It is still getting underway, with a budget of about $4 million for 1994-95. The Commission considers it too early yet for a detailed assessment of the program.

This section discusses some issues relating to Defence assistance for Australian industry in the export of defence-related goods and services.

It is important, however, not to overlook the other forms of defence-related exports which are emerging, for example: the establishment of the Republic of Singapore Air Force pilot training facility at RAAF Base Pearce in Western Australia; the leasing of the Delamere Electronic Warfare Ranges in the

Northern Territory to the air forces of other countries; and the possible export of intellectual property associated with specialist Defence facilities.

Some participants commented on the scope of the Government's export controls, and their administration. However, this subject raises a number of foreign affairs and strategic defence issues which extend beyond the scope of this inquiry.

5.4.1 Reasons for Defence involvement in export facilitation

Notwithstanding Austrade's national mandate to facilitate exports (see Sub. D88, p. 18), there are several strategic and commercial reasons for Defence involvement in helping firms to export defence-related goods and services.

Strategic benefits

As noted in Chapter 4, the *Strategic Review 1993* reflects a shift from viewing the benefits of defence-related exports as mainly accruing to industry, to recognising the strategic and commercial benefits which can accrue to Defence.

Facilitation of defence-related exports can help achieve wider Defence strategic and international policy objectives through the linkages that are developed with foreign governments, military forces and industry. These linkages are important for the development of government–to–government cooperation, and for the development of wider strategic alliances and relationships. This interaction contributes to mutual understanding within the region, and assists regional stability and security.

A practical example is the arrangement to assist Transfield Shipbuilding in its bid to initiate a joint project to build offshore patrol vessels for the Malaysian Navy. The Australian Government and Transfield are jointly funding a $16 million project design phase (News Release MIN 37/94). This venture would bring strategic benefits to Defence under the government–to–government agreements with Malaysia.

Commercial benefits

There could be significant benefits for Defence if the goods or services being considered for export are also planned for introduction into service with the Australian Defence Force (ADF). Where the product or service is already being used by the ADF, or is planned to be used, significant unit cost reductions may eventuate from economies of scale achieved as a result of exports. Further, through such exports, Australian companies could become more competitive internationally, providing further cost reductions for later ADF orders.

Benefits to Defence could also accrue where an export market for a product, which has a strategic importance for the ADF, better ensures that the Australian company can maintain the capability in Australia. Defence might not have to pay a premium to maintain the capability during periods of low demand, and the firm involved could be in a stronger position to provide a regional through-life support service. Defence has recognised these benefits:

> ASEAN countries and New Zealand have defence needs similar to Australia's, and some of the industry capabilities and technologies developed locally will be suited for regional use. Moreover, with competitive local industry capabilities for through-life support and adaptation, Australia can become an attractive support centre for the region's advanced defence technologies. (Sub. 29, p. 28)

The special nature of defence-related exports

Many inquiry participants, including Defence, considered that the special nature of defence-related exports justifies the provision by Defence, or some government agency, of export facilitation services. Although some defence-related exports proceed purely on a commercial basis, most are conducted under the auspices of various government–to–government agreements. So a government intermediary is required to assist industry.

A major feature of the DEP is its promotion and endorsement of Australian products and services at trade exhibitions, through trade missions, and in direct discussions with foreign military forces. The chances of export are significantly enhanced if it is in service with the ADF, or endorsed by the ADF. Defence noted:

> The ADF's reputation as a smart buyer means that a proven record as a credible supplier to the ADF will facilitate Australian companies' access to overseas defence markets and their ability to team with overseas companies, and being able to demonstrate that the ADF has bought a good or service is a key marketing advantage. (Sub. 29, p. 29)

Some participants went as far as to claim that it was virtually impossible to sell products overseas unless the domestic defence force has endorsed the product and introduced it into service.

Thomson Sintra Pacific, for instance, said endorsement through purchase was very important:

> To achieve a level of acceptance overseas, it is very important that a product be not only evaluated but also purchased by the ADF. Endorsement through a purchase is the least customers will demand from a medium size power like Australia. (Sub. 35, p.12)

Similarly, British Aerospace Australia supported such involvement:

> The greatest assistance that the ADF can offer in making export sales is to be the first customer for Australian products and services, and to specify Australian developed products in the tender process. (Sub. 23, p. 22)

The Commission acknowledges the importance of Defence purchase or endorsement to firms pursuing the export of defence-related goods and services. However, Defence and the ADF could not be expected to purchase Australian goods and services just to provide credibility to companies seeking exports. Strategic capability requirements and value for money must remain the main drivers for Defence in making its procurement decisions. This said, the Commission also acknowledges that strategic and commercial benefits can accrue to Defence through export sales, especially in the longer term.

5.4.2 Nature of Defence involvement

A number of participants considered that defence exports should be assisted under a larger and more comprehensive arrangement than the present DEP. For instance, ADI, Hawker Pacific and Transfield Shipbuilding all recommended the establishment of an organisation like the UK's Defence Export Services Organisation (DESO). ADI and Transfield envisaged it as a separate body, although Hawker Pacific recommended it be located in Austrade. ADI's reasons are representative:

> one cannot help but note that the defence and industry ministries of many overseas countries provide very extensive support to defence manufacturers seeking to export. Numerous examples could be cited, but perhaps the most notable is the United Kingdom's Defence Export Services Organisation (DESO). DESO can claim much of the credit for Britain's marked success in increasing its defence exports in the Middle East, the United States and in East and South East Asia during the last decade ... Australia has no organisation equivalent to DESO, but we would increase exports if we had one. (Sub. 33, p. 9)

DESO, a specialised arm of the UK Ministry of Defence, is a much larger organisation than the Australian DEP in terms of the resources it brings to its task. It provides a wide range of services to defence exporters from offices in the UK and around the world. In discussions with DESO, the Commission was informed that it also advises the Ministry whether changes to UK defence requirements or specifications could enhance export prospects.

In Australia's case, the range of defence export facilitation services is already considerable. There is the assistance provided through the DEP, the use of ADF personnel and equipment for product demonstrations and other marketing support activities at defence equipment exhibitions, and the activities of Austrade.

The Commission is not convinced that an extension of the role of the DEP is necessary. It suggests that the DEP should be evaluated in 1996.

At present, services under the DEP are provided free of charge. One way of augmenting the resources provided to the DEP by Defence would be to charge firms for some services. Austrade, for example, charges for the provision of some export facilitation services. The Commission suggests that Defence should investigate charging for some DEP services, particularly where non-generic services are provided to particular firms.

6 THE COMMERCIAL SUPPORT PROGRAM (CSP)

The CSP is playing a crucial role in improving the efficiency and effectiveness of defence procurement by exposing selected support activities to competition. The achievements to date are substantial. Further benefits to Defence, industry and the community will come from speeding up implementation of the CSP, and by Defence adopting a more flexible approach to defining activities to be tested under the CSP — including support activities on operational bases and within the Department of Defence and the ADF. Winning in-house options should be treated no differently from commercial contractors.

6.1 Introduction

The Wrigley Report (*The Defence Force and the Community — A Partnership in Australia's Defence)* was published in June 1990. In relation to contracting out of non-core functions in Defence, the report concluded:

> using the national infrastructure would not mean merely using contractors to save money: it would mean involving the private and public sectors actively to find the best way of doing each job — not just for now, but in a way that would promote efficiency and expansion capacity in time of need. And in doing so, the military organisation would be freed to concentrate on its core military functions. (Defence 1990, p. 538)

In mid-1991, the Commercial Support Program (CSP) was implemented to 'ensure that non-core support services and products are provided to core Defence activities in the most effective manner' (Defence 1992b, p. 1-3). Subsequently, in the CSP Manual (Edition 4) Defence has amended this aim to read '... in the most **cost-effective** manner' (Defence 1994f, p. 6)

The CSP operates through identifying non-core activities, and exposing them to competitive tendering processes. It offers industry the opportunity to compete for some work previously done exclusively by military and Defence civilian personnel. The lowest cost option is not always successful — cost-effectiveness also takes into account the financial viability of the tenderer, demonstrated management and technical capabilities, capacity to provide long-term support to the Australian Defence Force (ADF), and other value-for-money criteria.

Defence is implementing the CSP in three phases, referred to as 'tiers':

- Tier 1 covered 28 ADF activities specified by government, where commercial support would not impair readiness and where industry

capacity existed. Decisions on all but one of the Tier 1 activities were made, and almost all contracts were let, by the target date of 30 June 1993.

- Tier 2 is a continuous process which aims to ensure that all remaining non-core activities are examined systematically and subjected to the competitive tendering process. Tier 2 consists of five two-year increments, introduced annually from July 1992.
- Tier 3 will emerge as the CSP evolves into a program where the initiatives come from support activity areas and operational units, rather than from government directive in the case of Tier 1, and Defence Central in Tier 2.

Defence military or civilian teams may develop proposals and tender for the work, thus competing with commercial firms. When an activity is examined under the CSP, there are three possible results: it continues to be conducted as in the past (status quo), it is undertaken by Defence military or civilian personnel in accordance with a successful in-house proposal, or it is contracted to a commercial organisation.

The Government has agreed that CSP savings are to remain with Defence for reallocation to priority activities in accordance with the *Force Structure Review 1991*. Defence policy is that 20 per cent of Tier 1 net savings are to be used for department-wide purposes, leaving 80 per cent for the areas where the savings were made. For Tier 2, there is a 50/50 split of the net savings.

6.2 The CSP in practice

Examples of activities that have already been examined under the CSP include:

- catering at the Australian Defence Force Academy — an $18 million contract over 4 years to Spotless Pty Ltd, saving 39 per cent (or $2.9 million) a year;
- P3C Orion aircraft maintenance at RAAF Base Richmond — a contract to Hawker de Havilland for $20 million over 11 years, saving 22 per cent (or $0.5 million) a year; and
- the Defence National Storage and Distribution Centre at Moorebank NSW — work valued at $59 million over 5 years awarded to an in-house team, saving 62 per cent (or $19.3 million) a year.

A complete list (with brief details) of all activities examined as part of the CSP, and for which outcomes have been decided, is provided at Appendix E.

An important feature of the CSP to date is the balance between work won on a competitive basis by in-house teams, compared with commercial organisations. In value terms, around 40 per cent of work has remained in-house. It includes

some significant activities in which commercial organisations could have been expected to offer highly competitive proposals: Naval Air Station Nowra Base Support ($21 million), the Defence National Storage and Distribution Centre at Moorebank ($59 million), and DSTO Salisbury scientific, engineering and IT support services (total of $63 million).

The last of these provides an interesting example of the CSP process in practice, especially the nature of the work remaining in-house compared with that contracted out. Box 6.1 presents the facts. DSTO acknowledged to the inquiry that 'the award of contracts has a strong relationship to the nature of the work involved. The commercial tenderers were able to offer substantial savings in areas of low technology, particularly as a result of lower staff numbers. In areas of complex high technology, the in-house bids were able to win because of their superior demonstrated capability to deliver the services' (Department of Defence, DSTO, Canberra).

Box 6.1: **CSP illustrative example of DSTO, Salisbury (SA)**

The Defence Science and Technology Organisation (DSTO) provides Defence with advice on the application of science and technology that is best suited to Australia's defence and security needs. In early 1992, at DSTO's Salisbury site (including RAAF Base Edinburgh), the following activities were competed as part of the CSP: scientific and engineering, information systems and telecommunications, property, materials distribution, and media services.

There were 43 responses to the ITR, including five in-house bids (one for each of the five activities). After short listing, ten organisations were invited to submit a quote. Of the contracts available, three were won by private sector companies, as indicated:

- scientific and engineering support services ($40 million) — DSTO in-house
- information systems and telecommunications ($23 million) — DSTO in-house
- two contracts for property services and materials distribution ($14 million) — Serco Australia
- media services ($3 million) — British Aerospace Australia.

Other details include:

- all are three-year contracts with the option of two-year extensions;
- compared with 311 people before CSP, 261 are expected to be employed, 87 by contractors (including 32 ex-DSTO/RAAF staff) and 174 by DSTO;
- annual recurring savings of $2.6 million (around 15 per cent of pre-CSP costs);
- transition costs of $3 million (mainly for voluntary retrenchment packages because 101 DSTO/RAAF personnel were made redundant).

Source: Department of Defence, DSTO, Canberra.

Serco Australia gave its perspective on the scientific and engineering support contract in this DSTO activity:

> the Statement of Requirement was input specified, it sought 120 person years of effort. This left us with only one way to gain an advantage and that was to cut salaries, an approach we felt was untenable as, to provide a competent solution, we had to attract the highly skilled incumbents to join us. In the end we did bid it as part of our overall response to the five SORs included in the tender ... We would not bid such a tender again. (Sub. D68, p. 3)

Analysis of the details in Appendix E covering all 50 activities confirms that the picture given by the DSTO example does hold more generally. Of the successful in-house bids, the work is split evenly between more commonly available commercial functions (catering) and those requiring specialised technical skills (aircraft maintenance). In contrast, the former functions are clearly dominant among the successful commercial bids.

6.3 CSP achievements

There have been some substantial achievements with the CSP. Under Tier 1, activities which were tested involved the work of 2800 military and Defence civilian personnel. Under Tier 2, the activities of a further 2000 personnel have been tested so far.

A summary of how much has been achieved with the CSP, as at 30 August 1994, is in Box 6.2. New arrangements valued at $710 million have been established for the provision of support activities. Annual savings of $87 million are equivalent to 31 per cent of previous costs, a favourable result compared with expectations and experience elsewhere. As noted by AEEMA:

> Overseas studies have demonstrated that in some non-core areas such as support services (eg catering, aircraft and base maintenance etc.), the cost of private sector performance is 20-25% less than if the activities are carried out within the Defence establishment. (Sub. 22, p. 13)

The estimated annual savings do not, however, include any provision for the administrative costs of running the program such as for the CSP policy and management cells throughout Defence, and for preparing in-house bids.

In a relatively short time (less than three years) a wide range of activities has been reviewed, some have been contracted out to commercial providers and some have continued to be provided by Defence military or civilian teams, but in much more efficient and effective ways than before.

Box 6.2: **CSP progress report as at 30 August 1994**

• CSP evaluation decisions	:	**51**
- Commercial contracts	:	**31** (61 per cent)
- In-house options	:	**16** (31 per cent)
- Status quo retained	:	**4** (8 per cent)
• Projected recurring annual savings	:	**$87 million**
• Projected annual savings as a percentage of current costs	:	**31 per cent**
• Number of positions tested	:	**4800**
• Total value of all contracts	:	**$710 million** ($406 million [57%] in commercial contracts)

Source: Department of Defence.

During this inquiry other aspects of the CSP have attracted criticism. Of fundamental policy concern is the scope of Defence activities which could sensibly be subjected to examination under this program — a topic discussed in the following section. The remainder of the chapter examines some procedural aspects of the CSP: the treatment of in-house options compared with commercial bids, whether the processes are sufficiently open to scrutiny (the 'transparency' issue), and whether the CSP should be implemented more rapidly.

6.4 The scope of activities to be subjected to the CSP

Defence defines combat and combat-related activities within operational areas as core activities, as are Department of State functions that relate to the defence powers in the Constitution and to specific legislative requirements (Defence 1994f, Annex B). No core activity is to be examined under the CSP. All other activities are classified as non-core, but a recent development is that Defence has started to deem some of these as 'quarantined non-core' — and such activities are protected from the scrutiny of the CSP. The reason for Defence doing so stems from assessments of the minimum number of personnel required in uniform — see Section 6.4.4.

Such considerations have led to delay in Defence's publication of core/non-core determinations (originally planned for 30 June 1994). This delay has added to the uncertainty noted by participants such as British Aerospace Australia (BAeA):

> There appears to be a gulf between the policy intent and the practitioners' implementation of the CSP, to the extent that there is uncertainty as to what should constitute core and non-core defence activities when determining whether to put an activity to CSP or not. But, more importantly, there is no longer any value placed on increasing the front-line operations relative to support activities, ie, defence's 'tooth to tail' ratio. (Sub. 23, p. 21)

It is critical never to forget the fundamental intent of the program — to save on resources used in support activities in order to build up the combat capabilities of the ADF (the tooth-to-tail ratio). The scope for doing that could be unnecessarily limited by too rigid an approach to determining what are non-core functions. For example, even on operational bases many activities, such as weapons systems maintenance and military base support, could be undertaken (and already are in some other countries) by a commercial arrangement but which currently are considered core activities.

As the nature of what are core activities is essentially a Defence strategic issue on which the Commission has no expertise, it asked consultants well versed in such issues to examine and report on the appropriate strategic principles for deciding which activities should be deemed to be 'core'. That report is reproduced at Appendix F, and summarised below.

6.4.1 Consultants' study on the strategic focus of the CSP

The theme of the study is that close integration of civilian and military capabilities is essential to maximising the operational effectiveness of the ADF. The authors say that this judgment applies not just to peacetime tasks and training, but also in the event of hostilities.

The consultants argue that the most likely characteristic of any hostilities (other than those with a long warning time) is that they would be geographically dispersed, possibly focused on military bases and civilian infrastructure such as ports, railways, bridges etc. Australia's responses would be characterised by continuing collaboration between civilian and military activities, whereby 'distinctions between the civilian community and combat support for the ADF may become very blurred'. The consultants emphasise that the 'battlefield' would bear little resemblance to any conflict that has involved Australian forces in the past.

Yet, they say, the CSP Manual's approach fails to recognise adequately these facts. It presumes that there is a clear distinction between non-combat duties that must be undertaken by military personnel and those that could be done by civilians, and it interprets Australia's obligations under the Geneva Convention (and related Protocols) too narrowly by not giving sufficient recognition to our strategic circumstances.

The consultants draw attention to the apparent inconsistency between the present core/non-core distinction and a pertinent part of the *Strategic Review 1993:*

> Logistic support including transport and supply of consumables — Defence will make maximum use of facilities and services already available in the community. In particular, Defence will be looking for increased industry support in the north of Australia. (Defence 1993c, p. 73)

The study concludes that, *based on strategic considerations*, there needs to be greater refinement in the distinction between core and non-core functions, that the realities of close civilian-military cooperation need to be reflected in the CSP process, and that greater cooperation is essential between the military and industry to develop the latter's capability to support the ADF (see Appendix F for further details).

6.4.2 What happens in other countries?

During the course of this inquiry, the Commission briefly visited the United Kingdom, Canada and the USA for discussions with key people and organisations involved in defence procurement (see Appendix B). While those discussions covered the broad range of issues relevant to the inquiry, the following are specific examples of contracting out to commercial firms of what might, in the current Australian Defence approach, be regarded as core activities.

In the UK they included simulated air attacks on naval ships and ground troops, helicopter training, and maintenance and operation of the ballistic missile early warning system. Civilian support roles in specific hostilities included:

- civilian contractors during the Gulf War operating target drones to exercise Rapier surface-to-air missile systems;
- British civilians working under contract at Saudi Arabian air bases prior to the Iraqi invasion of Kuwait continued to work there, and to provide support to the Royal Air Force, during hostilities; and
- ships on the civil register were contracted to carry out resupply operations in the Falklands War.

Further examples are: some 1500 civilians are employed by a UK company at the Diego Garcia base for the US Rapid Deployment Force; and airfield support, including air traffic control and air base fire services, is already contracted out at the Gibraltar forward operational base.

In the USA, commercial firms provide launch services for strategic missiles, operate training bases, provide logistic support for deployed forces, and do

flight-line maintenance for some aircraft. Civilian specialists were used in the Vietnam and Gulf Wars, on land and at sea.

In the UK there is less emphasis on distinguishing between core and non-core. Rather, the question is asked why a particular activity needs to be undertaken by the military. For example, while a decision to scramble fighter interceptor aircraft is clearly military, the information on which the decision is based need not necessarily be generated by the military. In the USA there has long been close integration between industry and the military.

Importantly for the future, the Commission was made aware that, as defence equipment and systems become more complex, there will be a growing need to rely more on civilian specialists, a trend that will gradually break down the ability to denote any function as exclusively reserved to the military[1].

6.4.3 Testing department-wide activities under the CSP

The foregoing has focused on combat and combat-related activities. Also at issue in the core/non-core debate are the so-called Department of State functions and other department-wide activities.

Even in the case of policy advice, which clearly is a Department of State function, there are many supporting activities (such as conducting surveys and undertaking research work) that could be done by commercial contractors.

Examples of department-wide activities would be: management of computer networks of which Defence has several hundred; management of large mainframe computing centres; management and production of administrative forms; in-house publishing; the provision of travel and removal services; and most aspects of the operation of registries and mail services. These are non-core services for which there are substantial potential savings. As the Australian Information Industry Association (AIIA) noted:

> IT services which can be provided competitively by the private sector should not generally be regarded as a core activity by public sector agencies. (Sub. 42, p. 7)

The Commission understands that to date, of all these non-core services, only the management of three large mainframe computing centres in Canberra has been assessed for possible testing under the CSP. However, the new CSP Manual (Edition 4) includes a completely new chapter on department-wide activities, thus specifying operational procedures to test such activities under the CSP.

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[1] This point also was made in the Australian context by AEEMA. It argued that the pace of technical change in the electronics industry is so rapid that industry representatives should be involved in identifying non-core activities (Sub. 22, p. 14).

6.4.4 The Commission's views on the core/non-core distinction

The more that support activities become the responsibility of industry, the greater will be the capability of industry to support the ADF, including the provision of a surge capacity. The consultants' study (see Section 6.4.1), and evidence gathered during the Commission's overseas visits, show that Defence in Australia is currently treating as core many more activities than is essential. Doing so significantly reduces both cost savings and industry support capability.

BAeA's comments reflected the views of other participants in this regard:

> It is widely believed that some areas of the ADF are keen to retain as many uniformed service personnel as possible — despite the direction that this is both unnecessary and costly. Because of this the definition of non-core is relatively narrow and British Aerospace Australia believes Defence would benefit by broadening the scope of activities offered for commercialisation.
>
> A common fear in releasing core activities to industry is that non-uniformed personnel will not have the same commitment to their task during times of national emergency — but evidence tends to show that this is not the case. British Aerospace Australia currently employs more than 200 people in Saudi Arabia in support of a Royal Saudi Air Force contract. These employees are responsible for 'core' activities such as maintaining, upgrading and flying fighter aircraft and training Saudi aircrew as technicians and pilots. (Sub. D76, p. 5)

BAeA added the telling example of its own experience in wartime:

> During the Gulf War British Aerospace Australia's employees continued to carry out their duties throughout the hostilities despite living in areas which were constantly under enemy fire. Not one BAeA employee requested to return to Australia during the course of the war.
>
> It could be argued that if Australian civilians were prepared to remain in a foreign country during a period of national emergency, they would be equally, if not more, committed to supporting their own country in a similar situation. (Sub. D76, p. 5)

The Commission is of the view that any determination of core activities should not continue in perpetuity. There should be regular reviews to ascertain whether the context of the determinations has changed. In its September 1993 report on the CSP, Ernst and Young recommended:

> the DPMC (Defence Program Management Committee) should satisfy itself, in due course, that the core/non-core determination outcome has not resulted in high level 'core' determinations which mask many inherently non-core functions ... (and) that corporate guidance will be needed regarding the treatment of inherently non-core activities within defined 'core' functions. (Ernst and Young, 1993b, p. 18)

Defence made available to this inquiry the details of candidates nominated to date in Tier 2 Increments 1–3. These details indicate that some support activities have yet to be nominated. Examples are: the RAN Hydrographic Service; the

ADF Line Haul Service (a nationwide transport service operated by Army); the removal services provided to Service personnel and their families on posting to a new location; and the various clerical streams in the three Services. It is also noteworthy that Army has stopped putting forward activities for assessment under the CSP.

In the consultants' report (Appendix F) there is considerable discussion about the impact on the CSP of the Manpower Required in Uniform (MRU) requirements (now Personnel Required in Uniform [PRU]). This discussion concludes by saying that, given the role of the new Ready Reserve and revised roles for other reserve forces, 'if not carefully applied only to priority strategic roles, wider application of the MRU concept runs counter to Australia's strategic priorities and other important elements of Defence planning endorsed by Government' (p. 232).

The Commission accepts that the ADF may need to preserve some support activities which are required in combat (for example, cooks on RAN ships) and that these personnel must be placed when not serving in the combat unit (the so-called 'ship-to-shore' ratio). What is not so easy to accept is the contention that the only way of providing such a capability is to have them located on bases as 'quarantined non-core' personnel.

Not only would this make it more difficult to evaluate the total non-core activities of that base under the CSP, it also provides 'justification' for the retention of other non-core activities. For example, if cooks on RAN ships are to be regarded as quarantined non-core personnel when ashore, this does not necessarily justify the retention of a catering training activity and a catering personnel management activity. The PRU issue should not be allowed to slow down or restrict progress in the CSP. Nor should it divert attention from the key issue of the determination of core and non-core activities under the CSP.

Defence needs to re-examine from time to time how it can best focus its resources so as to do the job better, using industry's increasing competence in a wide range of support tasks. There should be the flexibility to change over time where the boundary lies between core and non-core activities, and for regular reviews to be conducted of past core/non-core determinations.

The Commission recommends that the support activities, which are currently regarded by Defence as core, be examined with a view to testing them under the Commercial Support Program. Core/non-core determinations should be reviewed regularly.

The Commission suggests that all support activities should be regarded as non-core unless shown to be core. Activities to be tested should include the support

functions at operational bases mainly staffed by military personnel, and some support activities performed by the Department of Defence and the ADF.

The examination and subsequent reviews could be facilitated by convening an interdepartmental committee similar to that which recommended the initial CSP activity list.

6.5 The in-house option

The fact that Defence allows in-house teams to compete against private tenderers has drawn considerable criticism from industry. Some participants felt that the identification of an activity as non-core indicates that it should be contracted out. BAeA was representative of these participants:

> if it is determined that a particular activity is 'non-core' and thus open to commercialisation, then it is a waste of taxpayers' time and money to allow the in-house option to bid. The aim of the CSP is to reduce the cost to Defence of having uniformed service personnel performing activities which can obviously be undertaken more cost-effectively by industry. For the spirit of CSP to be truly realised Defence must be prepared to defend its own recommendations more rigorously. (Sub. D76, p. 6)

In commenting that Defence has given inadequate justification for why it allows in-house bids, AEEMA said:

> The justification that has been given very strongly by Defence in favour of allowing an in-house bid is that they would never have got the commercial support program off the ground. They wouldn't have got staff union support for it to proceed unless they allowed it, and they needed that internal support to do it. So they are saying, 'Be grateful for small mercies'. (Transcript, p. 447)

Both Defence (Transcript p. 541) and the Automotive, Food, Metals and Engineering Union (Sub. D97, p. 7) pointed out that there is a formal agreement that, in cases where the jobs of civilian Defence employees are involved, an in-house bid must be allowed to proceed. Thus, the option of not having an in-house bid is currently limited to those activities undertaken solely by military personnel.

In the case of technically demanding tasks, there may be a risk that no private sector organisation is able to meet the requirement. The development of an in-house option might then be an appropriate risk management strategy. In addition, the assessment of private bids is likely to be facilitated by having an in-house option as a basis for comparison. An illustrative example of such a technically demanding task, maintenance of the F-111C aircraft at Amberley, is at Box 6.3.

Box 6.3: **F-111C deeper level maintenance**

The regular maintenance program for F-111C aircraft includes deeper level maintenance, undertaken at the RAAF Base Amberley in Queensland, of TF-30 engines and components, and provision of support services for the aircraft. These activities traditionally have been carried out by the RAAF, employing 343 military and 10 Defence civilian personnel.

An Invitation to Register Interest (ITR) was advertised in September 1992. Forty firms responded. A Request for Quotation (RFQ) was released to 22 firms in December 1992. Seven responded and an in-house option was submitted.

In October 1993 the RAAF decided to retain the activity in-house at a value of approximately $117 million over 11 years. The in-house option (a 44 per cent saving) was more than 15 per cent cheaper than the best private offer, and presented less risk. The transition costs of approximately $9 million (from personnel redundancies, purchasing new equipment, and modifying facilities) are expected to offset first year savings. Annual net savings of $9 million are expected to accrue from the second year of operation.

The in-house bid involved adoption of cellular work teams with military and Defence civilian personnel, a concept not tried before in the RAAF. The work force is to comprise of 107 military and 83 Defence civilian personnel.

****

One lesson which the RAAF said it learned from this F-111C case was that, although a prime management agent for all functions was preferred, most firms were not able to achieve that, or were not able to form consortia to do so.

Serco Australia strongly disagreed with the RAAF on why firms found bidding for the F-111C contract difficult:

> We were very interested in bidding all the tasks covered by this SOR and we were shortlisted for tender. We decided against bidding because we judged there to be too much risk in the SOR which was structured as a Standing Offer ... The customer was unwilling to give any assurance as to annual workload and we decided we could not take the risk of employing a permanent workforce in such circumstances. The lack of broader interest by other companies may have had more to do with the risk profile than a willingness or competency to take on the full range of work offered. (Sub. D68, p. 3)

The consultants' report (Appendix F) included an assessment of the F-111C case and concluded that, for strategic reasons, the various elements of the work may not have been packaged in a way that was attractive to industry. The consultants suggested there is scope for earlier involvement by industry in defining what is feasible in terms of industry support for projects such as F-111C maintenance.

Much of the criticism from industry about allowing in-house bids appears to stem from misunderstanding about the aim of the program. Some firms view

CSP simply as an outsourcing program, rather than focusing on its aim to ensure that Defence non-core support services are provided in the most efficient way, even if that be from within the Defence structure.

The Commission is of the view that, in principle, in-house bids should be allowed. An important reason for doing so is that in the commercial world it is well accepted that the processes of opening up internal activities to competition, or even just announcing such an intention, can be a strong catalyst for beneficial reform within the company. Moreover, in the case of Defence, in-house bids provide valuable information about the efficiency with which it undertakes a wide range of activities, and allow some in-house teams in the future to come up with innovative solutions even if other in-house teams were not successful in the past in competition with private bidders.

The September 1993 Ernst and Young report suggested there would be situations when it would not be cost-effective to mount an in-house option:

> ... there are circumstances where the additional work and cost associated with the development of an in-house option may be futile, wasteful of scarce resources, inappropriate and even damaging to staff morale. Defence needs to develop guidance which will assist managers to exercise sensible management judgment, on a case-by-case basis, whether to develop an in-house option. (Ernst and Young 1993b, p. 45)

The Commission agrees that an important consideration in whether or not to develop an in-house option is the likely cost of its preparation. In some cases that cost may be so large that it is not sensible to proceed, especially if past experience with that type of activity suggests that the in-house option has a relatively low probability of success.

The Commission recommends that, in cases where bid preparation costs are relatively high, and the probability of success for the in-house option is relatively low, Defence consider the option of not proceeding with an in-house bid.

In doing so, Defence should not be encumbered by the present restrictive agreement (mentioned above) that, where the jobs of Defence civilian employees are involved, an in-house option must be allowed to proceed.

6.5.1 Transition costs

Transition costs are the total costs of moving from the current activity to the new activity after an in-house or private option has been selected.

If a private option is selected, transition costs borne by Defence would include staff (including redundancy, retraining and relocation) costs and any facilities, equipment and materials supplied to the contractor to facilitate the transition.

There would be some offsetting receipts from the sale of assets, capital items or inventory no longer required.

Transition costs are applied to all bids in the tender evaluation process to enable comparison of like with like, as far as is possible. Defence must bear these costs when the contract is let to a private option, and bear some of the costs when an in-house option wins.

A number of participants expressed concern about the current treatment of transition costs in the evaluation of CSP proposals. BAeA said:

> BAeA's most significant and fundamental concern is in relation to transition costs and how they are being attributed to individual tenders. BAeA believes that it has been severely disadvantaged by the methodology applied to the association of transition costs and that a major review of this evaluation area should be initiated. It is the view of BAeA that existing Commonwealth liabilities in the form, for example, of potential redundancies and insurance premiums, should remain with the Commonwealth and not be applied to tenderers' bids as transition costs. (Sub. 23, pp. 21–2)

Serco Australia argued that 'transition costs should **not** be used in determining a tender winner, but be treated as a cost of staging the competition' (Sub. D68, p. 2). It added that it does not usually bid for CSP contracts where the proportion of Defence civilian personnel in the workforce is high because 'a disadvantage occurs and increases for a commercial tenderer as the proportion of public servants increases and as transition costs rise' (Sub. D68, pp. 1–2).

Certainly, the task for a private bidder to be successful becomes greater the higher the proportion of Defence civilian personnel in the in-house bid. As Defence pointed out:

> if an in-house bid proposes to increase the proportion of public servants relative to military members, there is a disadvantage to commercial bidders. This occurs because the cost of employing public servants is less than the cost of employing military personnel. (Sub. D102, p. 3)

Further, Defence informed the Commission that 'in the 52 CSP decisions made to date, transition costs have not been a significant factor in decisions on the successful tenderer' (Sub. D102, p. 3).

The Commission considers that the approach to transition costs adopted by Defence is correct in principle, as Defence must incur them when a CSP contract is let. So it would be unsound not to take account of transition costs in the evaluation of all tenders. However, the costs applied must be only the additional costs associated with the transition, and not include accrued items such as recreation and long service leave. As Serco Australia said, 'to take even the leave and long service leave costs out of ... transition costs would reduce the in-house advantage and improve the vigour of competition' (Sub. D68, p. 2).

The following notional example illustrates the treatment of the major transition cost — redundancy payments — in the comparison of a lower tendered private bid which may, nonetheless, result in a higher cost to Defence if the private bid were accepted.

Table 6.1: **A notional example of the treatment of redundancy costs**

Decision option	*Persons employed*	*Tendered price* *$ million*	*Tendered price plus transition costs* *$ million*
Existing arrangement (status quo)	200	na	na
In-house option (IHO)	150	10.0	11.25
Private option	100	8.0	13.0

Assumption: redundancy costs average $25 000 per person

In this example the private bid is 20 per cent below the in-house option. But the private option would entail loss of 200 Defence jobs for which the redundancy costs (notionally $25 000 per person) are put at $5 million, so that the total implied cost of $13 million exceeds the adjusted cost of $11.25 million (which includes $1.25 million for 50 redundancies) for the in-house option. While the example is simplistic — in practice, comparisons should be made on a net present value (NPV) basis — it does serve to draw out some important points.

Firstly, it throws some light on what may be a misunderstanding of the process. For example, Hawker Pacific said that 'massive military redundancies are being applied against civilian tenders' (Sub. 18, p. 12). The example above shows, however, that the in-house option also is loaded with the cost of any redundancies it would cause, although in this example they are fewer than for the private option.

Secondly, the way in which transition costs are accounted for can overturn the clear advantage of a relatively low tendered price. A recent review by Ernst and Young noted one important aspect:

> Although recommended in the CSP Manual, it appears that few Source Selection Teams applied detailed net present value (NPV) financial analysis. If a shorter period is used, NPV calculations will favour the options that have lower transition costs, compared with options that have higher transition costs and higher expected savings in future years. (Ernst & Young 1993a, p. 126)

Serco Australia argued that the 10–year period was not long enough, and that transition costs should be discounted to infinity. The Commission is of the view that the 10–year period is reasonable because most CSP contracts are shorter than 10 years, and because there may be significant changes in technology over the period of a contract, or 10 years. There can be no guarantee that the services specified in a particular contract will be required for 10 years or more.

Thirdly, it is essential that private sector bidders are fully informed in tender documentation of the size and nature of all elements of transition costs, so that they can properly assess their prospects for winning the contract. In this regard, Hawker de Havilland observed that transition costs are not made available to potential bidders (Sub. 40, p. 9).

In response to concerns from industry about the provision of transition costs to tenderers, Defence has revised its policy. In a submission on the Draft Report, Defence advised that 'information on estimated transition costs will be included in the documentation provided to industry as part of the Statement of Requirement (Sub. D102, p. 2).

This is a welcome development because it is critical that private tenderers have as complete a knowledge of transition costs as possible when they prepare their bids. Their significance is demonstrated by the case of base support services for the Army at Puckapunyal. The contract was awarded to Serco Australia and involves heavy transition costs of $6.3 million (which are met by Defence) compared with recurring annual savings of only $1.3 million. Details are provided in Box 6.4.

Box 6.4: **CSP illustrative example of Puckapunyal, Victoria.**

Situated in central Victoria, Puckapunyal is the Army's most significant training area in southern Australia. In 1993 the provision of base support at Puckapunyal which employed some 135 military and 145 civilian staff was tested under the CSP. Base support activities under tender included: catering, cleaning, sanitation, firefighting, waste disposal, laundry, security, facilities, maintenance, medical and dental services, recreational facilities management, range management, switchboard operation, reprographics, and grounds maintenance.

A Request for Tender was released in November 1992 for the provision of base support. Tenders closed in March 1993. Six companies tendered and there was an in-house tender. The contract was awarded to Serco Australia in partnership with Gardner Merchant Rowland in November 1993 at a value of $85.8 million for a period of five years.

Recurring annual savings will be some $1.3 million (7 per cent). They will be applied first to cover the transition costs of $6.3 million.

Source: Department of Defence, Army Office (Canberra).

According to Army, its experience with the CSP at Puckapunyal highlighted not only the need for greater understanding and recognition of the transition costs, especially with respect to human resources, but also:

- the importance of comprehensive Statements of Requirement;
- the need for structured and universally agreed tender assessment methodologies; and,
- the need for cost investigation expertise and agreed definition of value for money.

The Commission recommends that, under the Commercial Support Program, transition costs be estimated and included in tender documentation.

6.5.2 Monitoring the performance of successful in-house options

Sound contract management for successful in-house bids is critical to ensure:

- equal treatment compared with private options;
- that forecast savings are actually achieved; and
- open and effective competition in the next round of contracting.

Inquiry participants claimed problems in achieving satisfactory arrangements. AeroSpace Technologies of Australia (ASTA) said:

> It is difficult, if not impossible, to impose the same requirements on both, particularly the performance criteria. In industry's case if it doesn't perform it will be financially penalised and therefore the viability of the company can be at risk. This cannot be the case with the in-house activity. (Sub. 19, p. 9)

The recent Ernst and Young report commented:

> The difficulties associated with costing in-house options are likely to expose difficulties in the monitoring of successful in-house options. (Ernst and Young 1993a, p. 125)

A private contractor has to provide the specified goods and services at the agreed price, even if that is based on inaccurate and incorrect costing. At present, for successful in-house teams confronted by the same problem, there appears to be no mechanism to prevent additional resources (to those identified in the winning bid) being drawn from elsewhere in Defence at no cost to the activity. Put another way, the in-house option faces no risk in tendering a bid that is too low because it cannot 'go broke', as can its competitors, in the face of less than satisfactory performance.

It is essential that successful in-house teams be treated in the same manner as a private sector team had it won the contract. For successful in-house teams, there is a requirement that 'adequate and appropriate resource monitoring and

reporting arrangements are established' (Defence 1994f, p. 110). But the Commission doubts that this requirement is adequate to demonstrate that an in-house team's activities are fully quarantined from other Defence activities, and that they actually achieve the performance levels which were the basis of winning the work.

For example, does the reported performance of each successful in-house team take sufficient account of the costs of preparing the bid, other administrative overheads, training and other labour on-costs, and the costs of capital and facilities used? Where a private contractor has won, the Defence contract administrator must ensure 'the financial transactions associated with the CSP commercial contract (are) discretely identifiable in the Defence accounting record' (Defence 1994f, p. 111). There is no such requirement for a successful in-house team.

The September 1993 Ernst and Young report went a step further in relation to Defence ensuring that successful in-house teams achieve the forecast savings by recommending:

> ... to ensure both the appearance and fact of a 'level playing field' for industry and in-house competitors, the Review Team recommends that Implementation Directives for successful in-house options should be periodically audited by the Inspector General and the Australian Audit Office in the same way that commercial contracts are periodically audited (Ernst and Young 1993b, p. 25)

The Commission considers that successful in-house teams must be treated as commercially autonomous units, with accounts being available for scrutiny. This approach is essential to ensure the integrity of the CSP. If it is lacking, commercial firms will not bother to compete, and that would undermine the long-term viability of the program.

The Commission recommends that, when an in-house team wins a tender under the Commercial Support Program, it be managed within Defence as a commercially autonomous unit with its own set of accounts. It should be treated no differently from a commercial contractor. Monitoring and reporting arrangements should be put in place to ensure that the savings and performance agreed are achieved.

Looking to the future, what is to be the basis of competitive tendering when the terms of the current CSP contracts (including in-house arrangements) expire? Previously, the CSP Manual (Edition 3, p. 9-3) indicated that, 'if there is compelling evidence to support retention of the in-house option, then (the responsible authority) may decide to continue without a full review'. The current CSP Manual (Edition 4) is silent on this point. Defence commented that, in general, the guidance applying to non-core activities would apply, but said that:

> there may be cases where retention of an activity in-house without re-testing may be justified ... although it is considered that such retention will be exceptional. (Sub. D74, p. 9)

The Commission considers it would be contrary to the purpose of the program if this provision were used to exclude alternative tenderers. There must be provision for open and fair competition as contracts which have been won by in-house teams come up for renewal. An exception might be where the activity was winding down, and it would not be cost-effective to put it to tender for only a short period contract (a case cited by Defence at the public hearings (Transcript p. 543).

The Commission recommends that, where the in-house option has won a contract for an activity under the Commercial Support Program, the activity be opened to competition when the contract expires.

6.6 Transparency of the CSP process

The CSP process was seen by some participants as not being sufficiently open or 'transparent':

> one would have expected Defence to ensure that the process for Tier 1 contractor selection was beyond reproach. Unfortunately this has not been the case, not necessarily because of any Defence impropriety but because the process was not sufficiently transparent for industry to SEE that justice was being done. (WA Department of Commerce and Trade, Sub. 47, p. 4)

A prominent complaint from potential tenderers was the difficulty of extracting the necessary information from Defence in order to be able to assemble a soundly based bid. The Ernst and Young report confirmed that such complaints may be well-founded:

> Non-financial data is critical in the development of detailed costings of both commercial and in-house options ... The overall lack of detailed non-financial data would appear to place commercial tenderers at a significant disadvantage in terms of estimating costs. IHOs overcome data deficiency problems by using current 'on the job knowledge'. (Ernst and Young 1993a, p. 124)

Defence has made some effort to overcome these problems with, for example, the campaign ('Tell 'em its OK to tell') to encourage in-house personnel to speak frankly to external bidders during tender preparation.

BAeA acknowledged that development but thought that considerably more needs to be done:

> Although the problems historically generated by the presence of an internal bid have been somewhat dissipated by a change in policy within the CSP to encourage information flow relating to all aspects of the facts, this flow still needs to be co-

> ordinated in an orderly manner to ensure that information is promulgated evenly. Results of this change are not yet evident and this 'free-flow' solution does not address the concern of individuals providing incorrect or misleading information. (Sub. 23, p. 22)

In this regard, Hawker de Havilland requested 'that Defence place more emphasis and resources on the development of the SOR to ensure that it is comprehensive and contains appropriate factual information' (Sub. 40, p. 9). The Commission agrees that it is essential for Defence to provide such information.

Further, in recognition of its shortage of sophisticated tender evaluation skills, Defence has engaged the firm PSI Pty Ltd as consultants to provide assistance in activity definition, development of in-house options and tender evaluation. Defence commented that:

> This arrangement demonstrates the extent to which Defence will pursue fair and open competition in CSP evaluations. (Sub. 29, p. 67)

Other efforts by Defence to improve the transparency of the CSP processes include the periodic issue of the CSP Update publication and regular meetings of the CSP Consultative Forum (CSPCF) which includes industry representatives. In addition, Defence is now required to report CSP progress through the Consolidated Progress Report on Defence Initiatives in the annual budget process. This requirement provides an opportunity for parliamentary scrutiny of the Program.

6.7 Speed of implementation of the CSP

Early estimates indicated that savings from CSP could be in the region of $350 million a year. The success to date indicates that savings of that magnitude could well be achievable, and there are strong incentives to do so as quickly as possible. That leads the Commission to ask why the program is being implemented over such a long period, with Tier 2 consisting of five overlapping phases each of two years and not ending until 1998.

The same question was asked by several participants. ADI commented:

> In addition, the timescale for implementation of the CSP program should be advanced in order for Defence to experience greater efficiencies and earlier cost-cutting. (Sub. 33, p. 25)

And AEEMA said :

> While industry involvement has been a feature of the defence area for a number of years the extent of change under the CSP is viewed as radical within some sectors of the ADF — moreover the ten year timescale attached to the implementation appears to be inordinately long ... While it is recognised that changing the culture of Defence to

> accept greater private sector involvement cannot be achieved overnight there needs to be a more rapid pace of implementation. (Sub. 22, pp. 13–14)

As the Commission acknowledged earlier in this chapter, given the new demands on Defence of developing in-house options and evaluating them against commercial tenders, substantial progress was made in the first few years. Those demands and the corresponding learning process for commercial tenderers are the principal reasons why Defence judges that the remaining phases of CSP should not be undertaken too rapidly:

> Defence does not consider that the CSP should be implemented more rapidly since both industry and Defence are already extended in meeting the strict schedules and milestones of existing CSP evaluations. (Sub. 29, p. 68)

The following comments by Defence at the Draft Report public hearing indicate that Personnel Required in Uniform (PRU) considerations are already causing delays in the CSP:

> Once the employment policy (PRU) is determined, then I think we're in a better position to say: Are those (activities) out there really utilised for holding that uniformed manpower for these other purposes or not at all? (Transcript, p. 544).

This potential for delay in Tier 2 was recognised in the September 1993 Ernst and Young report:

> Current practices and the slow progress in relation to core and non-core determination, however, raise questions about the seriousness with which matters are being pursued. Additionally, there is the issue whether high level core determinations mask many inherently non-core functions, and at what stage it is appropriate to revisit earlier 'core decisions. ... some greater injection of urgency appears needed in relation to core/non-core determinations ... (Ernst and Young 1993b, p. 5)

Any undue delay could threaten the achievement of the considerable benefits promised by the CSP.

The Commission recommends that Defence take every opportunity to speed up implementation of the Commercial Support Program, to ensure that all the potential savings are achieved as soon as possible.

6.8 Conclusions

The CSP provides a valuable framework to Defence for assessing whether activities can be undertaken more efficiently and effectively by Defence personnel or by commercial contractors. It puts into practice concepts of competition and best value for money.

The Commission has been impressed by the commitment to the CSP at senior levels in Defence. That commitment must be ongoing, and shared across the Services, if the fundamental aim of the CSP is to be achieved in the years ahead.

It is too early yet to observe improvements, attributable to CSP, in the capability of Australian industry to support the ADF. But there is plenty of potential. How much of that can be harnessed depends on the range of activities tested under the CSP. There should be the flexibility to change over time where the boundary lies between core and non-core activities, and for regular reviews to be conducted of past core/non-core determinations.

Accordingly, the Commission is recommending that the support activities which are currently regarded by Defence as core, should be examined with a view to testing them under the Commercial Support Program; and that core/non-core determinations should be reviewed regularly. The examination and subsequent reviews could be facilitated by convening an interdepartmental committee similar to that which recommended the initial CSP activity list.

Every opportunity should be taken to speed up implementation of the CSP to ensure all the potential savings are achieved, and all the sooner applied to where they can best contribute to Australia's defence self-reliance capability.

7 THE COSTS OF TENDERING

The adoption by Defence of multi-stage tendering with rigorous shortlisting and less documentation has the potential to significantly reduce the costs of tendering for both itself and industry. Defence should also use performance specifications wherever possible; set and adhere to tender evaluation schedules; and pursue best commercial practice in procurement.

The costs of tendering for Defence contracts is an important aspect of the customer-supplier relationship between Defence and industry. Many firms believe that Defence could reduce the costs of tendering and contracting both to Defence and industry. This chapter discusses such concerns and suggests some ways in which costs could be reduced, while recognising that Defence is making progress in this area.

The chapter also discusses how reducing costs of tendering could help Defence achieve better value for money in procurement. Costs of tendering for industry are reflected in tender (and contract) prices, and may deter potential bidders. Further, many factors which increase costs to tenderers also increase costs to Defence in managing the tendering and contracting process.

Whilst this chapter addresses Defence procurement procedures which include a tendering process, there are purchases, especially up to a value of $2000, where tendering is not used. For example, purchases made against standing offers and common use contracts, electronic purchasing, and direct purchases using the Australian Government Credit Card.

If the concerns of inquiry participants about the tendering process are valid, Defence is burdening industry, and ultimately the wider community, with significant unnecessary costs. Australia is not alone in this regard. During the Commission's visit to the USA, industry executives said that doing business with the US Department of Defense was 20–30 per cent more costly than with commercial firms. Boeing, for example, runs two separate businesses — one military and one civil.

The Victorian Government submission illustrated these concerns:

> In the case of the P3C Orion contract, estimates have been made of up to $5m as the likely cost of tendering for the final companies in the bidding process; as there are five consortia still involved this could mean $20m of scarce resources will be wasted. (Sub. 50, p. 47)

Certainly, the evidence presented during the inquiry suggests there is scope for reducing the costs of tendering for both Defence and industry, while still

adhering to the major tenets of government purchasing — open and effective competition, value for money, and ethics and fair dealing with suppliers.

7.1 Industry surveys

In addition to the many comments from inquiry participants about the costs of tendering, two recent surveys of industry have canvassed the issue. The first was carried out by Defence in 1993 in response to comments from industry, particularly during the Price Review. The second was conducted by the Australian Chamber of Manufactures during the preparation of its submission to this inquiry.

7.1.1 Defence Costs of Tendering Industry Survey

This survey (see Box 7.1) was initiated by Defence and covered 145 companies bidding on contracts greater than $1 million in 1992-93, of which 81 (56 per cent) responded. The survey data were collected by a neutral third party to ensure anonymity.

The survey indicated that the tendering costs of firms for purchases of around $1 million were 2–5 per cent, tapering to 1–3 per cent for major acquisitions. The survey also showed some evidence that, below the $1 million figure, tendering costs grew disproportionately, to around 10 per cent for projects worth around $10 000. On this basis, it was suggested by firms that, where possible, projects be bundled into groups of at least $1 million, with smaller firms being encouraged to form consortia.

There is significant correlation between these survey results and the issues raised by participants in this inquiry. The survey reflected a range of sometimes conflicting views and experiences. For example, 58 per cent of respondents considered that multi-stage tendering would reduce their costs, 8 per cent suggested it would increase their costs and 34 per cent advised it would have no effect as, in many cases, it was already used in their sector.

Most considered that there should be a relationship between the time given for tender preparation and the time taken for tender evaluation. Most of these proposed a tender evaluation period between one and two times as long as the tender preparation period.

Box 7.1: **Defence survey on the costs of tendering**

Companies considered the following to have assisted in reducing their tendering costs:

- Invitations to Register Interest (ITRs);
- two-stage tendering;
- performance/functional specifications;
- industry briefings/teaming;
- commercial standards; and
- tender documents in electronic format.

Companies suggested some Defence arrangements increased tendering costs, including:

- transfer of inappropriate risks to tenderers;
- use of inappropriate and onerous contract terms and conditions rather than using commercial industry standards;
- complexity of tender material and need for differentiation by companies;
- long and unpredictable tender evaluation and other process times;
- demand for data and plans;
- inappropriate use of military specifications;
- changing of Defence project personnel;
- bond, legal and other costs; and
- Defence difficulty in understanding the development and use of performance specifications.

Source: Defence 1994c , pp. 5–6.

A comparison of the costs of tendering for Defence projects with those for other clients of responding companies indicated 74 per cent of responding companies thought Defence costs were higher (54 per cent 'much higher', and 20 per cent 'higher') (Defence 1994c, p. 22). The experiences of individual companies appeared to influence how efficient and effective Defence's tendering processes were perceived to be in comparison with private and other public sector organisations.

The Commission commends Defence on this survey initiative to monitor the costs of tendering, and sees value in its being repeated from time to time.

7.1.2 Australian Chamber of Manufactures survey

The Australian Chamber of Manufactures (ACM) submitted to the inquiry the results of a survey of over 100 randomly selected firms which had tendered for

Defence contracts; over 80 per cent of the firms responded. The questionnaire asked companies whether they 'agreed/disagreed' with, 'strongly agreed/disagreed' with, or were 'indifferent' to various statements, with the opportunity to offer additional comments. Respondents operated in all states and ranged from small firms to large multinationals.

ACM submitted:

> The survey indicated that over 75% of those surveyed believed the cost of tendering for Defence contracts was more expensive than tendering elsewhere. Respondents did not believe this cost could be justified because the buyer was Defence. (Sub. 48, p. 1)
>
> Companies were also asked to place a percentage figure on the additional cost of tendering for Defence contracts. One fifth of those surveyed consider the costs of tendering for defence contracts is at least double that of other tenders. The median figure was 20–25%. Tendering costs for companies, especially smaller ones, can be especially high. A 25% additional impost on these companies is significant. (Sub. 48, p. 4)

ACM reported that Defence did not adhere to its tendering timetables and that the level of information demanded in tenders was considered to be unreasonable. A move towards performance specifications was suggested:

> Over 90% of companies were prepared to be shortlisted on the basis of meeting functional/performance specifications. This question elicited the strongest response of the survey. (Sub. 48, p. 6)

It was submitted that Defence was ambiguous regarding its policy on quality pre-qualification, preventing firms from making informed decisions about whether to undergo the significant cost of acquiring it (Sub. 48, p. 8).

ACM's recommendations included that Defence:

- short list on the basis of functional/performance specifications;
- publish a timetable during tendering and adhere to it; and
- clearly articulate its policy on the requirement for quality systems.

7.2 Multi-stage tendering

A major consideration for Defence is whether or not to use multi-stage tendering. Defence conducts a tendering process including, as appropriate, Invitation to Register Interest (ITR), Request for Proposal (RFP) and Request for Tender (RFT) stages. Industry tends to view multi-stage tendering as, desirably, a staged process incorporating a broad ITR-like stage, followed by the RFT stage.

The key principle in multi-stage tendering is *shortlisting*. The successive stages lead progressively from a large number of interested bidders to a short list for

the issue of the RFT. In this report multi-stage tendering will mean a staged process based on issuing the RFT to a short list as quickly as possible.

The Commission's overseas visit revealed that the Procurement Executive in the UK Ministry of Defence has recently embraced a policy of shortlisting. The main motivation for reform was the high costs of tendering, caused by having too many tenderers to evaluate, because there was no limit on the number of tenderers at the RFT (their Invitation to Tender ITT) stage.

In the USA, procurement staff are trying to employ more shortlisting. However, there are significant obstacles, notably from Congress, to excluding any contenders from the later stages of tendering. An issue which emanated from the visit to the US Department of Defense was whether an ITR stage is required at all in some cases. It was suggested that, for those Australian procurement projects for which Defence has sufficient market knowledge, it need only advertise the availability of the draft RFP for industry comment. The Commission agrees.

7.2.1 Comments by industry participants

Inquiry participants voiced widespread support for multi–stage tendering, provided it is combined with rigorous shortlisting.

The Australian Information Industry Association (AIIA) submitted:

> For 'one-off' procurement, AIIA supports a two-stage process: a Request for Information (RFI) not greater than 50 pages, open to all potential suppliers and listing evaluation criteria and weightings, and a Request for Tender (RFT) limited to realistic shortlisted suppliers, generally no more than three. (Sub. 42, p. 10)

Thomson Sintra Pacific said:

> To be efficient, tendering should have a maximum of 2 steps. An small ITR to determine what companies can do the job followed by a restricted tender to 2 or 3 maximum shortlisted. This will avoid [a] very expensive RFT or asking 5 to 10 companies to put in a complete tender at considerable cost. (Sub. 35, p. 12)

BAeA focused on the benefits of knowing whether the firm had been shortlisted or not as soon as possible:

> BAeA would prefer to know soon after the tender goes in whether it had very little chance of winning, rather than to live with the uncertainty over the full tender evaluation period ... The concept of two-stage tendering is used widely and successfully elsewhere in the world. It saves companies money because they will not have to make huge outlays if they are knocked out in the first round. (Sub. 23, p. 18)

AEEMA gave a useful perspective on the costs of not shortlisting through a multi-stage tendering process:

> The amount of information demanded in Requests for Tender, and even Registrations of Interest, is increasing to the point where responses are effectively becoming project definition studies, provided at no cost to Defence. (Sub. 22, p. 11)

This comment also relates to industry concerns about 'design by tender' on the part of Defence (see Section 7.4).

During a visit to Mincom Pty Ltd in Brisbane, the Commission was briefed on the estimated impact of a tendering process employed by Defence in the Supply Systems Redevelopment Project (SSRP) for a project value of some $100 million. There were 50 expressions of interest for this project, 20 tenderers, and 6 of these tenderers shortlisted. It was estimated that each of these 6 spent around $0.5 million (in direct and indirect costs) to get to that stage. Two firms were then shortlisted again. Mincom estimates this extra step cost it another $0.5 million. Such a process appears unnecessarily complicated to the Commission, and it meant a heavy cost burden on Defence, industry and the community.

Hawker Pacific, whilst acknowledging that multi-stage tendering has a cost in that it could lengthen the process, said:

> The Commonwealth should have a more stringent ROI (Registration of Interest) stage from which it selects a limited number of firms for the tender proper, probably a maximum of two or three. The positive result of this from a commercial aspect is that it avoids companies wasting valuable manhours and other resources only to be dropped from the eventual short list. (Sub. 18, p. 9)

AAAI voiced its support for multi-stage tendering which it saw as appropriate where tenders are based on performance specifications. Where projects could be ill-defined or complex rendering the costs of tendering high anyway, or when there was likely to be a range of possible solutions, it was appropriate to stage tendering in order to progressively reduce options and bidders, whilst maintaining the 'developmental' aspect of the project (Sub. 14, p. 12).

7.2.2 The Defence approach

Defence's approach to the tendering process has changed significantly due mainly to pressure from industry concerning the costs of tendering. In the past Defence avoided the risk of not having the best firm in the RFT stage by maintaining the competition with a relatively large number of bidders in all tendering stages. This approach was also seen to maintain high levels of transparency and to satisfy probity requirements.

In recent large projects like the Minehunter Coastal and P3C Refurbishment, Defence has employed multi-stage tendering based on the principle of shortlisting to achieve value for money, to maintain competition, transparency

and probity, and to reduce the costs of tendering. But this approach does not seem to be refined to the point where a short list for the issue of the RFT would be two to three bidders. In its submission to the Inquiry, Defence maintained:

> an optimum number of tenderers and suppliers may exist for different types of procurement. However, this optimum level is difficult to define. The use of restricted tenders by Defence effectively dictates a maximum number of tenderers and may have the benefit of restricting tendering costs and time for both Defence and industry.
>
> Defence has, so far, conducted limited investigation into the determination of optimum tenderer or supplier numbers. Recent experience suggests that in (Major Capital Equipment) MCE projects 4–6 tenderers provides a good basis for competition, though in some cases fewer tenderers may provide a suitable competitive basis. (Sub. 29, p. 32)

This position is surprisingly ambivalent given the Defence survey on the costs of tendering (see Section 7.1.1). In the facilities construction industry the nature of business is such that the shortlisting of two bidders poses some risk because construction firms run many parallel bids, and may withdraw from a particular tendering process if a better, but competing, opportunity is secured. In this case a short list of three may be appropriate. In the procurement of major capital equipment, and repair parts, maintenance stores and consumables, the market is different.

Particularly in major capital equipment procurement, where most firms form consortia of interested companies to make a comprehensive bid for the prime contract, the risk to Defence of not having the best bidder in the final list of, say, two bidders would be low. To have more than two or three bidders at the RFT stage seems to be bureaucratic, and costly, insurance given the low risks.

A further concern of Defence is that, even if it adopted a process of rigorous shortlisting through a disciplined multi-stage tendering process, industry still may not accept the change:

> bidders eliminated in the first round (ie after the ITR) may complain to Minister/Parliament; effort spent in nugatory review and reporting will increase costs. If this occurs frequently, there would be a tendency to revert to one-stage, full public tendering for most procurements which would increase tendering costs for no benefit. (Sub. 29, p. 47)

This concern is based on past experience, and any review after the contract is awarded would add to Defence costs. However, during the Commission's industry visits, firms expressed their support for multi-stage tendering, and called on Defence to be more like commercial firms in its treatment of losing bidders.

The Commission considers that Defence should proceed with multi-stage tendering in the knowledge that most of industry would welcome it. This would

involve more rapid shortlisting and less documentation than the current process, thereby reducing costs for Defence, industry and the wider community.

For lower value procurements, Defence already encourages multi-stage tendering where appropriate, and it also encourages long–term relationships, and the increased use of DAS Common Use Contracts and Defence Standing Offers to reduce the costs of tendering for itself and for industry.

7.2.3 Successful bid strike rate

Commercial decisions taken by firms to participate in Defence tendering and contracting are based to some degree on the expected 'strike rate' or the success rate of the firm's tenders. A firm will not generally enter a tendering process unless it believes it can successfully tender a price which will return sufficient profit.

The MTIA's comments illustrate that apparently low tendering costs for individual contracts can translate into a substantial overall cost burden on a firm:

> It is sometimes claimed that the cost of tendering is around 2% of the contract price ... From a company perspective, these figures are not an adequate reflection of the costs involved. Tender costs should be placed in the context of a company's success rate in bidding, rather than as a straight percentage of the current bid revenue. If there is an average success rate of 25%, a bid cost of 2% of bid revenue translates to an average 8% of company revenue. (Sub. 36, p. 13)

A similar point was made by AEEMA:

> AEEMA members estimate that the cost of tendering for Defence projects is often in the range of 2% to 4% of the final project ... Many companies operate on the basis that they will be successful in say 1 in 5 contracts and that therefore over a year tendering costs can represent 10-20% of a company's turnover. (Sub. 22, p. 10)

In many cases, firms will see themselves as competing in a particular market, tendering for a number of defence projects, rather than as simply bidding for one contract. The tendering costs will therefore be spread across a range of projects. Nevertheless, tender prices will reflect the overall cost of tendering, averaged over successful bids.

Defence would increase the strike rate by restricting the number of tenderers to a small core of firms considered most likely to be successful through a multi-stage tendering process. Such an approach would mean firms would, on average, have a high strike rate when shortlisted, and lower tendering costs overall. And it would be consistent with the Commission's conclusion that Defence, industry and the community would be better served by Defence

adopting a comprehensive approach to the use of multi-stage tendering based on rigorous shortlisting.

7.3 Timing issues

The time taken by Defence to complete the evaluation of tenders can impose significant, unplanned costs on both industry and Defence itself. One industry cost is the maintenance of the bid team. This is costly but essential, especially if Defence seeks clarification of a bid. Maintenance costs of the bidding team are increased if announced milestones in the evaluation schedule are extended; these changes are usually the result of unexpected delays in the actual evaluation, requests for new information from tenderers, or a formal retendering process.

Related issues are the time allowed by Defence to submit tenders, and changes to the scope and requirements of a project. Defence procurement projects are sometimes changed in scope, schedule or budget by influences external to Defence, and a few projects are cancelled or shelved. Defence should seek to minimise such events because the costs of tendering still affect it and industry.

7.3.1 Changes in the tender evaluation schedule

Many participants commented on the costs incurred waiting for Defence to make its decision on tenders. During an informal discussion, one participant offered: ‘the best thing Defence could do to reduce Defence and industry costs of tendering is to advise the tender evaluation schedule and stick to it!’.

The key issues are setting a realistic tender evaluation schedule, and adhering to it.

Setting the schedule

In the Defence Costs of Tendering Industry Survey, firms were asked to comment on any relationship between bid development and bid evaluation timings. Of the responding companies 73 per cent felt there should be a relationship of between 1:1 and 1:2.

Some representative company comments were: ‘if we can sort through the SOR and write our proposal in X days, then Defence should be able to evaluate the proposal in approximately the same time’; ‘a declared timetable in the RFT showing tender review and contract award process (is required)’; and, ‘evaluation of tender time equal to preparation time’ (Defence 1994c, p. 28).

The view in industry is clear: a reasonable relationship should be maintained between time allowed for bid preparation and the subsequent tender evaluation, and the total schedule for the tendering process should be announced at the beginning of the tendering process. The circulation of draft ITR and RFT documentation to contending firms needs to be allowed for in the total schedule — see Sections 7.3.2 and 7.4.2

Sticking to the schedule

Inquiry participants, and participants in the Defence Costs of Tendering Industry Survey, felt that tender evaluation took far too long, did not keep to the published schedule, or was not supported by a published schedule.

Sometimes there are delays, even prior to the RFT, which can result in wastage. BAeA said:

> Significant marketing costs are incurred by companies in assembling teams to track a particular bid, register interest and attend site briefings. Slippage of Request for Tenders (RFTs), or program schedule changes can cause a timing/resource conflict for industry, adversely impacting the ability of companies to proceed with bids. (Sub. 23, pp. 22–3)

The Defence Industries Council of Western Australia gave an example of where time taken by Defence for evaluation was inordinately long:

> One of DICWA's members has reported that a tender was released for the supply of a large ($30m) computer based system. The tenderers were allowed three months to submit their tender. However, Defence took nearly 18 months (May 1992 to November 1993) to evaluate the tender and select the preferred tenderer. This lengthy evaluation period resulted in additional costs to each tenderer. The Defence program managers need to be held more accountable for the impact of their actions, especially if large contracts are involved. (Sub. 45, p. 4)

AEEMA remarked about the lack of discipline in Defence in adhering to timings:

> They simply cannot keep the schedules. Schedules are of no consequence. We have to deliver our tender on the date, we're dead if we don't — absolutely must. We get 3 months typically for anything up to a $100m program. They allow themselves 6 months, 9 months for evaluation, so there's a discrepancy in what they allow themselves to start with, but it very often doubles in time — more often than not it doubles in time, with no discipline. (Transcript, pp. 445–6)

Not all participants had had bad experiences with Defence's evaluation periods. For example, Thomson Sintra Pacific stated:

> The tendering process of Defence is well organised. Advance warning is sufficient. Evaluation time is long but acceptable. (Sub. 35, p. 12)

And Normalair-Garrett said:

> Defence evaluation periods are long but not necessarily excessive and it is doubtful whether firms incur additional legitimate costs. (Sub. 13, p. 8)

Defence acknowledged that timing delays are 'a major area of complaint from industry'. Defence stated:

> Tender evaluation plans for major capital equipment projects are now required to identify key tender evaluation milestones and dates for achievements with monitoring of achievement and reporting of slippages to DEPSEC A&L. This is intended to provide a greater level of accountability for meeting time frames. (Sub. 29, p. 44)

This internal discipline in Defence is important, but as important is ensuring bidders are made aware of the tender evaluation schedule, and are advised of any necessary changes as quickly as possible. The issue of effective communications with tenderers during the tender evaluation period is discussed below in Section 7.3.2.

Defence has implemented a number of measures to assist in setting and meeting announced schedules. Equipment acquisition strategies specify timetables for each phase of the procurement process; and an instruction has been issued outlining benchmarking and performance reporting targets for the various levels of purchasing, including benchmarks for tender evaluation. However, the fact remains that firms still have significant concerns about this aspect of tendering for Defence contracts.

The Commission concludes that Defence must publish the tender evaluation schedule as early as possible, and adhere to the published schedule.

7.3.2 Changes in scope or requirements

Changes in project scope and requirements between the Statement of Requirement (SOR)/ITR and RFT stages can impose significant costs on firms. These changes lead firms to increase the amount of time they have to pay and support the bid team, to change the composition and size of teams, and to form new relationships with other firms to bring the new requisite skills into the consortium. BAeA, when commenting on the Commercial Support Program (CSP), referred to the issue of changes in scope:

> On other occasions, significant changes in the scope of work between the Registration of Interest (ROI) and RFT stages have resulted in companies finding themselves unable to proceed with their bidding, thereby rendering its previous expenditure nugatory. (Sub. 23, p. 23)

AEEMA commented on the additional costs imposed on industry by changes in Defence requirements:

> There are numerous examples of significant wastage to industry through having to maintain bid teams over an excessively lengthy bidding/evaluation process or when requirements are cancelled after the submission of tenders. Consistent delays and program deferrals by Defence add considerably to the cost of industry. Defence has a limited, if any, recognition of the 'bottom line' impact of these costs on industry (and on its own costs). (Sub. 22, p. 10)

The impact of such changes may be exacerbated if Defence provides late advice about changes, or if the method of communicating them is not direct or clear.

In order to reduce the incidence of changes to scope and requirements, the Commission considers that Defence should review the effectiveness of communications between the evaluation and project teams, and the contending firms. One way to do this is to circulate draft RFP and RFT documents to contending firms. During such a process the firms would offer advice and suggestions about the proposed project scope, schedule and requirements for consideration by Defence. This is another cost in the process, but the benefits of better information could be significant. This was the view of those visited in the USA by the Commission where this practice is common.

When Defence imposes a significant change on an announced project requirement or tender evaluation schedule which results in a retendering process, serious consideration should be given to reimbursing reasonable costs for the preparation of the new tender to bidders. Such situations probably arise only in major capital projects.

Although it may not seem to be normal commercial practice to reimburse such costs, there needs to be a discipline placed on a monopsonistic buyer like Defence not to take unreasonable advantage of its suppliers.

Defence has already made the initial moves in this direction. An internal instruction has been issued containing guidelines on how to assess whether a case exists for such reimbursement. Also, the actual reimbursement of reasonable costs to firms for retendering occasioned by Defence has been piloted in one major capital equipment procurement project, the Army Australian Tactical Command and Control System (AUSTACCS) project.

7.3.3 Maintaining the bid team

A significant number of participants commented on the costs of retaining the team which formulated the bid. A firm will prepare its bid for a Defence contract on the basis of the published tender evaluation schedule, and include a

mix of expertise and knowledge in the bid team to enable it to handle requests for clarification and information from the Defence Tender Evaluation Board.

As noted by the MTIA Defence Manufacturers' Council, any slippage in the schedule increases the costs of maintaining such a team:

> The time taken by Defence to consider tenders, select them and then announce the winner can be twelve months or more on major programs. For the bidders this causes resource problems as the team that bids the program is generally the basis of the team that will work the program if their bid succeeds. The cost of holding the team ready and available can be very high, particularly if the tenderer lacks other current major projects to carry the direct and overhead costs of the staff on standby. (Sub. 36, p. 14)

BAeA, whilst acknowledging the initial costs of tendering were part of business, considered that the costs of having to wait for long periods of time supporting bid teams before advice of the contract award from Defence were unwarranted:

> The costs of tendering are huge, but industry accepts this as an investment in securing a contract. BAeA's concern however, is the fact that industry may have to wait up to 12 months to find out whether a given company has been successful in securing a contract. Herein lies a major problem for business. The cost of uncertainty is immeasurable. Business can not conduct successful forward planning, forecasting, budgeting, when it has absolutely no idea for months on end whether a contract will or won't eventuate. Does industry keep project teams on hold for that time just in case a contract is won and negotiations begin immediately? (Sub. 23, p. 18)

The Commission concludes that a multi-stage tendering process, which includes advising losing bidders as soon as they are eliminated by the evaluation process, will allow firms to redeploy valuable resources to other tasks.

7.3.4 Time to submit tenders

Rushed tenders may be wasteful in their use of a firm's resources. Hawker Pacific commented:

> While the situation has improved more time is still required. There are still occasions where substantial overtime is being expended to meet tender deadlines. (Sub. 18, p. 11)

The example from Halpern Glick Maunsell in Box 7.2 illustrates unrealistic times being allocated by Defence for tender preparation for a capital facilities project.

In its main submission to the inquiry Defence stated that 'tender periods are sufficient. When necessary Defence is able to grant extensions of time and has done so' (Sub. 29, p. 43). Whilst the Halpern Glick Maunsell experience may not be typical, it seems there are occasions when Defence does not allow adequate time for bidders to prepare proposals and tenders. The Commission encourages Defence to ensure adequate time is allowed in the future.

Box 7.2: **Example of short lead time for tender preparation**

An advertisement appeared on 7 November 1992 asking consultants to lodge a Registration of Interest for the design phase of the Warehouse Expansion Program (a $3.8 million project). The Registration of Interest was prepared and lodged by the closing date of 25 November 1992. On 7 December 1992 ie. 8 working days from close of Registration of Interest, we were advised by facsimile that we would be invited to submit a tender for the Design Consultancy.

The Tender was scheduled to close, in Canberra on 15 December 1992, ie 8 calendar days after receiving facsimile advice. The tender documents, consisting of some 200 pages of text and diagrams were not received until 9 December 1992, leaving three working days to review the documents, prepare the tender and dispatch it to Canberra. Following a vigorous protest at the impracticality of this program, an extension of time was reluctantly granted to 21 December 1992.

A review of the program contained in the tender, however, showed that Defence intended to award the contract on 24 December 1992, with work commencing on 28 December 1992 and being completed by 28 January 1993. For this program to be achieved Defence would have to supply a large amount of data and detailed briefings to the successful tenderer on 24 December 1992 in Perth by staff based in Canberra.

It was later found that Defence were in fact unable to supply the data and briefing to the successful tenderer within the required time and had to grant an extension of time and extra costs to meet the delay caused to the contractor ... The experience gained on this tender has raised very serious doubts as to the competency and experience of Defence staff in preparing tender timetables and programs and assessing received tenders.

Source: Halpern Glick Maunsell, Sub. 46, pp. 10-12.

7.4 The costs of detail

One theme in participants' comments was that Defence tender documentation, particularly RFPs and RFTs, demands too much detail. Some attributed this to the use of product or technical specifications by Defence rather than performance or functional specifications. BAeA observed:

> a tendency by Defence to overspecify and to require far more information than is really necessary. Specifications should focus on minimum functional requirements rather than on unnecessary details and optional features. (Sub. 23, p. 18)

7.4.1 Specification of the requirement

Some participants felt that requests for tender covered details best left to the contracting stage. Thomson Sintra Pacific said:

> Tenders should be less precise in terms of the final detailed response. These details should be finalised with the successful tenderer only. The tenderer should only be asked to outline the major factors which are necessary to make the decision. Enormous efforts are spent in details which 90% of the time are not essential to the evaluation and will never be used except by the winner. (Sub. 35, p. 12)

The MTIA Defence Manufacturers' Council contended that work which should be bid for as part of the contract had been brought forward to, in effect, become a cost of tendering:

> The Commonwealth claims that its intention is to reduce the costs of tendering. Yet concurrently Defence is issuing Request For Tenders (RFTs) of increasing complexity ... The Council is concerned that there seems to be limited recognition of the relationship between tender data requirements, their generation and the consequent effect on tendering costs. (Sub. 36, p. 14)

On the other hand, some participants pointed to costs which result from lack of specificity about Defence requirements. In some cases this vagueness appears to arise from the use of performance specifications. Techway submitted:

> problems have arisen in tender documents where the requirement has been insufficiently specific to ensure that the expectations of the user and supplier are matched. This may result in extending the evaluation process, and therefore the costs incurred by potential suppliers and the Department. (Sub. 11, p. 5)

The Commission also encountered complaints that, when using performance specifications, Defence was unwilling to disclose the particular solution it had in mind. This could result in firms developing a new solution when all that was sought was an updated version of an existing item.

Defence needs to draft specifications with some key goals in mind. If Defence wants innovative, and possibly less costly, solutions then performance specifications may be appropriate; if Defence wants compliance to a detailed, or special purpose, requirement then technical specifications may be appropriate. But Defence may only need to specify a requirement to meet specified Australian or international standards. If Defence were to reduce the amount of detail it provides to industry it would reduce its own costs, even though industry still had to provide a detailed response.

A related issue is the many thousands of current technical specifications in Defence which may not have been regularly reviewed, or the need for them challenged. In Box 7.3 are some examples of where Defence has been able to change the way it specified items to achieve significant cost savings. A more systematic review seems called for as it should produce further savings.

Box 7.3: **Cutting costs by varying specifications**

Studies in the late 1980s indicated that 80 per cent of Defence logistic procurement was based on technical specifications which were older than ten years. There were clear examples where adopting an alternative would offer improved capability and lower costs.

Prior to the Gulf War the RAN had insisted on diesel fuels containing additives based on USN and RN fuel specifications, despite advice from oil companies that modern commercial marine diesel fuels met or exceeded the performance offered by the additives. The additives increased the price of the RAN's fuel bill. During the Gulf War the RAN vessels accepted less expensive commercial fuels and suffered no adverse operating penalty, but decreased the costs of fuel.

The specification used for Army's slouch hats prior to 1991 had a total brim width specification +/– 1 cm. Following a proposal from a contractor the specification was varied to +/– 2 cm with no noticeable adverse impact but with a 20% cost reduction.

In many instances the Services have continued to return to the original prime suppliers of major equipments for maintenance sub-assemblies long after there was any contractual requirement to do so. This has frequently incurred unnecessary cost, and resulted in sourcing offshore. In 1992 the RAN responded to an approach from a Queensland company to test a locally supplied generator mounting. This proved to be the quality equivalent of the previously US procured item, with a substantial cost saving.

Source: Industry Involvement and Contracting Division, Department of Defence.

In relation to the need for detailed information, Defence commented:

> Defence is aware that ... provision of detailed information is costly to tenderers. However, for complex major projects, provision of detailed information is essential to enable comprehensive and fair solutions. (Sub. 29, p. 43)

Defence did not view performance specifications as unambiguously superior, maintaining that performance and technical specifications have their respective part to play in an efficient procurement process. Box 7.4 outlines the major advantages and disadvantages of performance specifications from the Defence point of view.

The Commission's visit to the USA revealed that the Acquisition Reform Bill before Congress had provisions to make it easier to use performance specifications in defence procurements. There is also provision for the US Department of Defense to procure products which have achieved acceptance in the commercial market, rather than through the use of detailed technical specifications. The Acquisition Reform Bill was developed to improve procurement efficiency following the end of the Cold War and the associated cutbacks.

Box 7.4: **Defence view of performance specifications**

Advantages

- could be more innovative or cost effective;
- could provide a larger range of solutions;
- possess the ability to improve on Life Cycle Costing;
- provide greater operational reliability; and
- reduce acquisition costs relative to the level of capability procured.

Disadvantages:

- difficulty in ensuring that the performance specified is measurable, and in identifying acceptance criteria;
- evaluation of a performance based tender and management of the subsequent contract may be more complex and therefore more costly;
- the carriage of risk varies depending on specification type: suppliers will carry most of the risk if performance specifications are used; the Commonwealth when detailed technical specifications are used;
- suppliers may be reluctant to suggest innovative or unusual proposals, particularly in response to the circulation of draft specifications, for fear of losing competitive advantage and difficulties in proposing a new approach to a conservative buyer; and
- detailed technical specifications may be faster and cheaper to tender against.

Source: Sub. 29, pp. 42–3.

The Commission considers that Defence should use performance specifications in RFPs and RFTs wherever possible. In complex procurements Defence may need to include detailed technical specifications for specialist components. However, greater reliance on certain Australian and international standards would reduce the need for some technical specifications.

7.4.2 Documentation

The tender documentation requirements in Defence projects, especially the bigger, more complex capital procurement projects, are large and demanding. The question needs to be asked whether all the documentation sought/provided, at considerable cost to both Defence and industry, is really necessary.

Transfield Shipbuilding's comments on the requirements for Defence tender documentation were representative of most:

> Documentation requirements must not be driven by individual Service Departments and must not degenerate into product and process specifications. There must be greater use

> of generic international and national standards. It is very costly to satisfy Tender Document Requirement Lists, many components of which do not add to the overall effectiveness of the project. Furthermore, some of this is nugatory work since a large proportion may not be included in the final contract. The close involvement of both parties from early project stages will supplant the need for extensive and subsequently superfluous documentation. (Sub. 10, pp. 5-6)

Such comments prompt consideration of how Defence can best define exactly what tender documentation is required for each tendering stage. One way to reduce the level of detail and documentation in the tendering process, which Defence has already started to use, is to release draft RFP and RFT documents for industry comment. This approach is employed in the USA where draft RFP documents are circulated to contending firms for comment to ascertain whether the draft specifications are sensible and attainable, and whether the draft contract arrangements are appropriate.

The Victorian Government provided support for this approach:

> If procurers consulted with industry before preparing the tender specifications, they could: avoid old or limited prospect technologies; cut the risk of new product development; and nurture potential export products. (Sub. 50, pp. 47–8)

There is no reason why such an approach should lengthen the tendering process overall. Prospective bidders have the opportunity to make suggestions to reduce the detail and cost, or to withdraw at that stage. Firms which decide to tender would do so in full knowledge of the requirement earlier in the process. This may well reduce bid development time and costs.

BAeA also drew attention to costs arising from vagueness over how much detail Defence seeks from the various studies required to be included in tenders:

> One of the problems here is that the detail required is not always specified and, because any given company is keen to get the competitive edge and win the tender, companies end up erring on the side of generating too much information. If Defence simply stated that they wanted a half page broad outline on what companies were offering — and you would be marked down if you gave more — then that's what companies would do. As it stands they (Defence) say they want an outline and in an effort to clarify and impress, that outline could end up as anything from three pages to 300. This not only adds to industry's costs in the time and effort to develop the response, but also adds to Defence's costs because someone has to read and evaluate the work. (Sub. 23, p. 19)

This view was supported during inquiry visits when it was claimed that the uncertainty generated by inadequate direction from Defence about how it wanted tenders presented, increased the cost of preparing the substance of the submission.

For example, what are the requirements for the length and format of registrations of interest, proposals and tenders? Defence does not provide

guidance to firms on what might be reasonable for the various stages of the tendering process.

The recent F-111 Simulator RFT required bids to be presented in a specified format, based on the evaluation team's work breakdown study. If adopted organisation-wide in Defence, in conjunction with the suggestions made below on submission length and format, such an approach would have the effect of standardising Defence tender presentation requirements thereby removing uncertainty and reducing industry costs. Just as importantly, there would be similar reductions in costs for Defence in developing and evaluating tender documentation.

The Commission asks, without wishing to be prescriptive, why registrations of interest generally need to be more than 20 pages in length. The Commission recognises that in some cases, particularly where shortlisting is to be undertaken on the basis of the ITR, a higher page limit might be needed. Similarly, the Commission questions why responses to RFPs need to be more than 100 pages, say. There would seem to be value to all concerned in Defence specifying the maximum length and desired format for bids on a project-by-project basis.

The Commission concludes that Defence should seek to reduce the costs of tendering for itself and industry by issuing more specific guidance to project teams which would include:

- requesting only information really required at each tendering stage;
- circulating draft RFP and RFT documents to contending firms for comment; and
- specifying appropriate length and format standards for registrations of interest, proposals and tenders.

7.4.3 Design by tender

Some participants were of the view that Defence used the tendering process to define projects, or do market research, at the expense of contending firms. Their comments covered all facets of Defence procurement, including major capital equipment and facilities procurement, and the Commercial Support Program. The Australian Association of Aerospace Industries (AAAI) submitted:

> getting Defence business is both costly and time consuming. The depth of detail asked for is often seen as unnecessary and far in excess of that required for sensible evaluation by (say) the Boeing Company for projects of similar cost and complexity, and in some cases amounts to little more than seeking 'free' project definition by the tenderers. (Sub. 14, p. 12)

Thomson Sintra Pacific and the MTIA Defence Manufacturers' Council made similar comments, especially in relation to the problem of too much detail being requested in the formal pre-RFT stages — stages supposed to reduce (through shortlisting) the number of firms developing detailed bids.

AEEMA offered as an example the Parakeet project, a project with a total value of some $165 million to procure field communications for the Army, where:

> a great deal of the tendering information in that involved specialised studies which can be easily identified and which should not have been done by seven tenderers ... The prime tenderers, the prime Australian tenderers, were spending $1 million plus on the preparation of those tenders. Their partners, Australian and others, were spending at least that amount of money again. So you are talking 3 to 4 million dollars spent by ... seven tenderers ... in studies I would have said three-quarters of it, maybe more, was unnecessary to the evaluation. (Transcript, pp. 443–4)

These criticisms seem to be well founded. In the Capital Equipment Procurement Manual the reasons given for employing the Invitation to Register Interest (ITR) and Request for Proposal (RFP) stages in tendering include gathering more information on available solutions:

> The ITR and RFP are two means of obtaining information from industry as a forerunner to developing RFT documentation. The ITR tends to focus on industry interest and capability, and, to a lesser extent, on refining the requirement. (Defence 1992c, Part 4, Chapter 3, p. 3-1)

It is legitimate for Defence to seek market and product information in the tendering process, but not at any cost. Firms must still make individual commercial decisions about bidding for Defence contracts. The Commission concludes that Defence should not frame tendering documentation in such a way as to require bidding firms to produce detailed reports or studies at their own expense prior to contract award. Such requirements should be met by the parallel funding of project definition studies or through the contract itself.

7.5 Ranking and weighting of tender evaluation criteria

Inquiry participants commented on the inclusion of both the ranking and weighting of tender evaluation criteria in tender documentation. Observations were also made in the Defence Costs of Tendering Industry Survey. The Commission's overseas visit revealed that both the UK and USA provide ranked tender evaluation criteria and that weightings are advised where it is judged appropriate.

AIIA's view was quite clear:

> at the start of the tender process, industry should be given clear evaluation criteria and weightings. These are essential in both the RFIs and RFTs to enable companies to clearly choose whether they should compete. (Sub. 42, p. 3)

Hawker de Havilland also stressed the importance of having evaluation criteria detailed in early tender documents, recommending that:

> SOR and ITR data packs contain [amongst other things] an indication of the weightings or relative importance of evaluation criteria. (Sub. 40, p. 10)

In discussing a model used by Westrail in WA for engaging consultants for major facilities projects, Halpern Glick Maunsell indicated that 'specific selection criteria and the weightings will be defined' in the tender brief (Sub. 46, Attachment 2, p. 4).

In the Defence Costs of Tendering Industry Survey (Defence 1994c, pp. 31–2), 83 per cent of responding companies indicated that being given Defence tender evaluation criteria would be of benefit, provided the criteria were not changed after the close of tenders. Some typical comments were: 'this would show the tenderers the areas on which to concentrate effort, ie to better focus or direct resources in the bid phase'; 'definition of the selection criteria and their weightings greatly assists in developing bids responsive to the customer's priority needs and consequently encourages better value for money proposals'; 'we are disillusioned as to the ability of Defence to use assessment criteria fairly'; and, 'it would allow bid/no bid decisions to be properly made'.

In their responses to the Draft Report, several participants supported the inclusion of ranked selection criteria and weightings in tender documents. Disney-Howe Associates explained that the Australian Customs Service and DAS had included both ranked selection criteria and weightings in an RFT for a Coastwatch service, and commented that 'industry is still at a loss to comprehend why DAS and Customs can see the benefits to both Government and industry of ... publishing evaluation criteria priorities and weightings, yet Defence cannot' (Sub. D62, p.11). BAeA also supported the provision of such advice by Defence:

> The concept of selection criteria and rankings could be further enhanced by the introduction of weightings which would ensure complete probity in the decision making process and give very clear directives to industry as to the customer's requirements and judging criteria. (Sub. D76, p.3)

While Defence said that 'the evaluation criteria applicable to particular procurements are clearly stated in the RFT for major projects' (Sub. 29, p. 45), industry is claiming that, in some cases, the criteria are not specific enough, not clear enough, or not adequately ranked to allow an unambiguous, balanced bid to be developed. This increases the costs of tendering to Defence and industry

because industry takes longer, or uses more resources than should be required to develop the bid; Defence takes longer, or uses more resources than should be required to evaluate the bids; and retendering, or at least requests for additional information by way of clarification, may be required before Defence can decide on the contract award.

Defence also stated that the 'RFT may indicate the relative importance of evaluation criteria by using terms such as "more important" and "less important". Exact rankings of evaluation criteria, or any weightings attached to such criteria, will not be stated. That could inhibit the subsequent evaluation, and flexibility and the exercise of broad qualitative judgments in the light of the total tender responses' (Sub. 29, p. 45).

The Commission considers that selection criteria, together with their rankings, should be clearly set out in RFTs.

The inclusion of specific weightings in RFTs might increase industry's confidence in the transparency of the selection process. But it would limit Defence's flexibility to adapt its requirements in the knowledge of what is offered by the various tenderers, thereby putting in jeopardy achievement of the value-for-money objective. As tender evaluation proceeds, some factors may become more important and others less so. Further, several factors, such as industry capability development, technology transfer, and enhancement of export prospects are not readily amenable to quantification (see Section 4.1.3) and would, in any case, be matters of judgment.

On balance, the Commission does not agree that weightings should always be provided in tender documentation, although there may be occasions (for example, relatively minor, straightforward or regular purchases) when to do so would be appropriate.

7.6 Summary and recommendation

It is encouraging to be informed by Defence that moves are underway to identify best procurement practice through initiatives like: 'project management best practice studies (including AII, ILS, costs of tendering and "lessons learnt"); the establishment of a best practice/benchmark database; and improving tender evaluation training for project staff' (Sub. 57, pp. A1-A2).

The Commission considers that Defence can achieve significant reductions in the costs of tendering for itself and industry by adopting best commercial practice in its tendering process.

The Commission recommends that, to reduce the costs of tendering for itself and industry, Defence proceed with multi-stage tendering involving more rapid shortlisting and less documentation than at present. In that regard, Defence should:

(a) use performance specifications in Requests for Proposals (RFPs) and Requests for Tenders (RFTs) wherever possible;

(b) circulate draft RFP and RFT documents to contending firms for comment;

(c) advise the appropriate length and format standards for registrations of interest, proposals and tenders in tender documentation;

(d) specify selection criteria and rank them in order of importance in tender documentation;

(e) issue more specific guidance to project teams to ensure that no more than the information required at each tendering stage is requested;

(f) allow adequate time for bid preparation;

(g) publish tender evaluation schedules as early as possible, and adhere to them; and

(h) advise losing bidders as soon as they are eliminated by the evaluation process.

Table 7.1 summarises what the Commission is driving at in relation to multi-stage tendering and tender documentation. The ITR or RFP stage may not always be required. The numbers are indicative, rather than a firm prescription. For example, where the ITR is to be used as a basis for shortlisting, more than 20 pages could be allowed in a submission.

Table 7.1: **Multi-stage tendering and tender documentation**

Tender stages	*Number of responding firms*	*Maximum number of pages allowed in a submission*
Invitation to Register Interest (ITR)	Open	20
Request for Proposal (RFP)	5-6	Up to 100
Request for Tender (RFT)	2	As required

8 OTHER COST ISSUES IN PROCUREMENT

Value for money in the administration of routine defence procurement would be improved by using basic procurement procedures for purchases of up to $10 000. Better value for money must also must be obtained in the administration of large procurement projects. Options that Defence should try include: greater use of civilian staff on project teams; contracting out elements of the procurement process; and contracting out the whole of selected projects.

Best value for money in defence procurement can be attained only if the most efficient methods of acquisition are utilised, and if the costs of doing business for both Defence and industry are minimised.

The costs of tendering were covered in Chapter 7. Other issues that affect costs and which were the particular focus of participants during this inquiry included: the overly rigorous application of procurement guidelines, sharing the costs of risk management, the need for quality accreditation, control of intellectual property, and Defence's administrative overheads (including the training and tenure of Defence project managers). This chapter examines how the efficiency of acquisition and supply in those areas could be improved.

8.1 Application of procurement guidelines

The most appropriate and cost-effective mechanism for Defence to procure goods and services will vary with their value and complexity. Details of current arrangements are shown in Box 3.5, Chapter 3.

Department of Administrative Services (DAS) guidelines for all Commonwealth Government purchasing categorise as 'basic' procurements those up to a value of $2000, for which oral quotations, use of standing offers, and credit card purchases are regarded as appropriate mechanisms. The guidelines include more formal procedures for procurements of higher value.

Defence purchasing procedures make it clear that the DAS guidelines aim to assist in achieving value for money and are not meant to be fixed rules. However, the Commission observed during the course of the inquiry that some Defence purchasing units do require that they be applied strictly. This practice appears to give unwarranted emphasis to probity requirements and offer insufficient flexibility for purchasing officers to achieve best value for money.

The administrative costs of procurement should reflect the value of the purchases involved. In this regard, Army Logistic Command told the Commission that 94 per cent of its orders are for amounts of less than $10 000 and these account for only 16 per cent of the total value of its procurement. Against that background, it said that the $2000 guideline limit for basic purchasing is too low, and argued in favour of extending it to $10 000. Army Logistic Command said that 'financial benchmarks will inevitably lead to a degree of rigidity. In any case, cost is only one of several factors to be considered in choosing an appropriate procurement method and the desirability of financial benchmarks can be questioned'.

The Commission agrees that many types of defence procurement of a routine nature and that exceed $2000 in value could be processed as 'basic' procurements. Doing so would be quite consistent with the objectives of the Commonwealth procurement guidelines which state that 'Departments may introduce other supplementary arrangements, including higher level benchmarks if they choose, to take into account market or operational considerations' (DAS 1989). At the public hearings following release of the Draft Report, Defence said it favoured an increase in the benchmarks, but conveyed to the Commission no appreciation that it has the scope (under the guidelines) to take that initiative.

What Defence has done is to communicate to purchasing units and purchasing officers that all aspects of a procurement, not simply its monetary level, should be considered when determining what procurement method to use. This requires some discretion by purchasing officers in deciding which procurement procedure should be used in each case. But there is evidence that an overly rigid approach persists, particularly at the lower levels of defence procurement.

The excessive administrative costs of such a rigid approach could be reduced by Defence adopting 'basic' procurement processes for purchases of relatively low value, but greater than the current guideline of $2000. As for all government purchases, it still would be necessary to satisfy certain standard requirements, including those in Department of Finance Regulations and the Audit Act. Procurement officers should continue to have discretion to apply more rigorous procedures if they judge it warranted for some particular purchases, but they should be the exception rather than the rule.

The Commission recommends that Defence follow 'basic' procurement procedures for purchases of up to $10 000.

8.1.1 DAS Common Use Contracts

DAS Common Use Contracts (CUCs) are standing offer arrangements negotiated by DAS to procure goods and services commonly used by Commonwealth departments. Under these arrangements DAS establishes a preferred list of suppliers and collects a commission on sales, of 1 to 4 per cent, from the supplier.

The Auditor-General reviewed the use of CUCs in 1992 and found that they can effectively harness the collective purchasing power of the Commonwealth to achieve major cost savings. Another advantage of CUCs is that they are a form of 'just-in-time' purchasing which reduces the need to stockpile.

Defence (1992d) stated that 'if a suitable DAS CUC exists, then the purchasing officer must use this arrangement. There is generally no choice to purchase outside of DAS arrangements.'

The Commission considers, however, that if the use of CUCs were to be mandatory, that may, in some cases, be detrimental to achieving best value for money. For example, the RAAF has an electronic system whereby purchasing officers on bases can obtain readily available commercial items from predetermined wholesale suppliers. The Commission was informed that this system can sometimes provide better value for money than purchasing through a CUC.

In the Commission's view, the responsible purchasing officer must be able to make best use of all the purchasing options available, and thereby achieve best value for money. This approach implies that use of CUCs should not be mandatory.

The Department of Administrative Services (DAS) does not agree. It asserts that any exemption of Defence from the requirement to use CUCs 'is both inadvisable and inconsistent with current Government policy' (Sub. D94, p. 6). DAS argues that CUCs play a central role in achieving the objective of value for money, particularly over the longer term; because they capture the benefits from the combined purchasing power of government agencies, they avoid duplication of effort and reduce transactions costs. The DAS view is that, while some individual purchase may be at a lower price than available under a CUC, focusing on a single acquisition tends to ignore the broader benefits of CUCs, and any exemptions will tend to erode those benefits (Sub. D94, p. 6).

The Commission sees the merits of these arguments. But the mandatory imposition of centrally negotiated CUCs sits uneasily with the devolution of responsibility to purchasing officers. Rather, CUCs should be just one of several effective means of achieving the Government's objective of best value for money.

The Commission supports the current practice of paying a commission to DAS, and it should be on the basis of full cost recovery. The amount of commission, together with information about the quality of the supplier's service and price offered, will give Defence an indication of whether CUCs or other methods — such as period contracts in conjunction with electronic purchasing methods (as used by the RAAF and Army Logistics Commands), or direct purchasing — represent best value for money.

8.2 Sharing the costs of risk

Defence procurement projects, particularly those involving a substantial element of development work, face relatively high risks:

- performance requirements may not be achieved;
- production costs and maintenance requirements may exceed expected levels;
- equipment life may be less than expected; and
- there may be delays in delivery.

How these risks are managed will have an important bearing on the cost of procurement.

As a public sector agency, responsible for the security of Australia, Defence could reasonably be expected to be more risk averse than private firms. However, there appears to be an increasing tendency for it to impose unlimited liability on contractors — as evidenced in the submission (Sub. 22) from the Australian Electrical and Electronic Manufacturers' Association (AEEMA) — a practice which may unjustifiably increase costs, some of which will be passed on to Defence. Further, some contractors will make a commercial decision not to supply Defence rather than accept unlimited liability. The resulting diminished competition could increase costs for Defence. The trade-off between risks and costs warrants careful examination.

Additionally, a number of organisations believed Defence should share risk more equitably. For example, AEEMA stated:

> The problem can be resolved by sharing in a more equitable manner the risk between contractor and contracted to prevent the contracting party effectively divorcing itself of bearing any risk for using equipment and services in the most appropriate manner. (Sub. 22, Attachment 2, p. 17)

The Australian Information Industry Association (AIIA) contrasted the amount of risk that suppliers were expected to carry in Defence contracts and private sector and overseas defence markets:

> IT suppliers should not, however, be expected to bear greater risk exposures in Defence contracts than they would normally bear in the private sector commercial or other overseas defence marketplaces. (Sub. 42, p. 10)

To support claims that Defence places too much of the risk burden on contractors, several participants gave specific examples:

- AIIA (Sub. 42, pp. 10-11) commented that Defence imposes systems integration solutions on contractors, and that contractors bear the risk associated with this approach;
- AEEMA (Transcript, p. 452) argued that fixed-price contracting leads to contractors having to factor a 'risk element' into bids to allow for the possibility that actual cost may exceed the expected level;
- the MTIA Defence Manufacturers' Council (Sub. 36, p. 18) alluded to Defence use of fixed-price contracts for development projects which causes too much risk to be placed on contractors; and
- Transfield Shipbuilding (Sub. 10, p. 7) considered that contract escalation clauses need adjusting, to enable more equitable sharing of the risk that labour rates might increase as a result of some change in industrial relations.

To overcome the risk sharing problem, some participants suggested that, as a general rule, Defence and contractors should bear risks within their respective control. For example, the Construction Industry Engineering Services Group cited aspects of the *No Dispute* report (National Public Works Conference and National Building and Construction Council 1990):

> *No Dispute* ... identified that the correct basis for contract delivery in respect of allocating obligations and/or risks for projects were the principles expounded by international construction lawyer Max Abrahamson.
>
> ... In essence, those principles dictate that: a party to a contract should bear a risk where the risk is within the party's control. This means that a Principal should not ask a Contractor to price an unquantifiable risk that is within the control of the Principal although the Principal may ask the Contractor to manage and control a neutral risk. (Sub. 9, p. 5)

It also commented that, if the Abrahamson Principle were adopted:

> tender prices will accurately reflect the real cost of construction because there will be no built-in margin to cover unknown risks outside the control of the Contractor. (Sub. 9, p. 5)

Defence agreed that 'risk should be allocated to the party best able to manage that risk' (Sub. 29, p. 38) and said that 'the risks associated with system integration or other high risk activities are placed where those risks can best be assessed and managed' (Sub. 29, p. 37). Nevertheless, there is the perception among participants that they are required to bear too much of the risk.

The Commission considers that, as a general rule, Defence and contractors should bear risks within their respective control. DAS pointed out that for some years this principle has been an integral part of Commonwealth procurement guidelines (Sub. D94, p. 4).

8.2.1 Standard forms of contracts

There was considerable criticism of Defence over one particular aspect of risk management — the practice of using other than well established standard forms of contracts covering the design and construction of facilities. Such criticism came from the Australian Institute of Quantity Surveyors (Sub. D92), the Australian Council of Building Design Professions Ltd (Sub. D71), and the Association of Consulting Engineers Australia (Sub. D93).

The last of these, the ACEA, said that it advises consultant engineers not to sign the form of contract developed by Defence because it specifies a standard of care beyond that covered by any professional indemnity insurance policy. The Association pointed out that the consequent negotiations increase delays and costs, and create 'an adversarial environment between client and consultant which mitigates against a successful project' (Sub. D93, p. 3). The ACEA regards Defence's approach not only as poor commercial practice, but also as one that is inconsistent with the Government's commitment to reform of the construction industry. An element of that reform is the adoption of standard forms of contract developed by the Construction Industry Development Agency.

DAS offered more specific comment about reform of the construction industry. It noted widespread industry concerns about the Government's commitment to reform, that 'much of the criticism centres on Defence's apparent reluctance to commit to the adoption of standard contracts', and that 'the approach Defence adopts to risk management in its construction contracts ... essentially requires that all risk be borne by the contractor' (Sub. D94, pp. 3–4).

The Commission concludes that Defence should review its forms of contracts for consulting and construction services, with the aim of ensuring that it adopts industry-wide standard forms of contracts wherever possible.

8.2.2 Design and construct contracts

Several participants commented on Defence's development and use of a unique design and construct contract for facilities projects. For example, the Australian Council of Building Design Professionals was particularly concerned that this leads to the duplication of the design phase of the project, and to the loss of

control over the design by the client (Defence). The Council explained the problem as follows:

> The design and construct model ... duplicates the design process by the number of bids, and this in turn is an unnecessary cost to industry. It also takes control of the design process (which determines the value of the building) away from the design consultant who acts in the interests of the client. ... with the contractor in control, only the cost of building is considered without full account being taken of the life cycle costs. (Sub. D71, p. 1)

Defence put the contrary opinion that the design and construct approach gives the client (Defence) greater control, and that a single responsibility (under competitive conditions) for design, construction and maintenance has the potential to offer best value for money (Sub. D107, p. 2).

8.3 Accreditation

For some contracts, Defence will insist that contractors have quality accreditation and/or a cost schedule control system in place. They reduce the risk that equipment supplied is either faulty or costs more than budgeted. If such requirements exceed the standards for similar commercial projects, Defence can expect to pay a premium. This is justifiable where Defence has reason to be more risk averse than its private sector counterparts: for example, it may require more exacting quality control, given the possibility of dire consequences in the event of equipment failure during training or combat.

While some participants commented on the high cost of becoming accredited, most had no objection to accreditation per se. However, some argued that, if there is to be accreditation, contracts should not be awarded to non-accredited organisations. For example, the Department of Commerce and Trade, Western Australia observed:

> Having made the effort [to attain quality accreditation] and incurred the associated expense, some firms have then found that even though a quality accreditation is included in the statement of requirement, their tenders for Defence work have been unsuccessful in favour of non-accredited companies. (Sub. 47, p. 5)

Defence policy is that quality systems must be in place, according to a defined schedule, during the term of the contract. Quality accreditation is not and never has been a mandatory requirement for a company to participate in tendering (Sub. 56, p. 1). It is a ‘contract deliverable’.

The Commission agrees with that approach. Quality accreditation should not be required prior to tendering. However, as part of its risk management strategy, it would be reasonable for Defence to regard pre-tendering accreditation as an advantageous factor for a company. But Defence must make it quite clear to

potential suppliers that this is so. Therefore, before entering the tender process, non-accredited companies must decide, based on commercial criteria, whether to incur the expense of obtaining quality accreditation.

Standards Australia expressed a concern that Defence quality accreditation schemes involve duplication of commercial arrangements. It was said that in many cases commercial suppliers have to obtain separate certification by Defence even though they possess similar commercial certification (Sub 4, p. 1). In relation to these claims, Defence said that:

> the acceptance of and compliance with Australian or International Quality Standards by contractors on a commercial basis generally reduces the need for contractors to develop quality procedures acceptable to the Department. (Sub. 29, p. 38)

The Commission's understanding is that Defence does accept recognised international and Australian certifications, and that no unnecessary duplication occurs. However, according to the Defence Quality Assurance Organisation, such general accreditation is sometimes too broad to satisfy Defence's special quality requirements such as for operationally critical supplies.

8.4 Intellectual property

The efficiency of acquisition of goods and services by Defence depends importantly on the ownership of and access to intellectual property (IP). This issue is becoming progressively more important as computer software accounts for a growing proportion of the procurement costs of many major projects. The ability to provide through-life support, and to extend the life of many weapons 'platforms', depends critically on access to intellectual property.

Organisations whose members are involved in development contracts commented that Defence retains ownership of IP from those contracts. Some of these organisations considered this unnecessary, and suggested that Defence adopt the approach taken in Canada and the UK, and insist only on access to IP. For example, AEEMA stated:

> Intellectual property at the end of a development project is owned by the Department of Defence and you then have to negotiate to be the person that either produces the solution to the Australian Government — and has the rights to the export of that product overseas. I would think that what is critical for the Defence Department is having the rights to the access of the research, not having the ownership of the intellectual property itself. (Transcript, pp. 451–2)

And, AIIA argued for the transferral of rights for the use of IP to private firms:

> AIIA's preferred position is that Defence should consider transferring ownership of the rights to intellectual property to companies to enable them to further develop their products for export purposes. (Sub. 42, p. 8)

The policy enunciated in May 1994 by the Minister for Defence (News Release MIN 51/94) should, if correctly implemented, alleviate participants' concerns regarding IP, while also ensuring that Defence has the necessary access to relevant IP throughout the life cycle of each project. A first step in that implementation process was the circulation in June 1994 of a replacement chapter on IP for the Capital Procurement Manual. The most pertinent part of that chapter is as follows.

> Project managers should presume that **Australian industry will own the IP generated under contract to supply Defence unless it can be shown that there are significant benefits resulting from Defence ownership.** This is a substantial departure from the traditional approach of Defence owning the IP it has paid for and then licensing it to industry for commercial exploitation. This changed approach stems from the view that more benefit in terms of increased investment and commercial exploitation is likely to be achieved when ownership ... is vested in Australian industry. (Defence 1992c, Part 2, Chapter 12 as revised June 1994, para. 1228)

8.5 Administrative costs of procurement to Defence

Defence spending on the procurement process itself (including the CSP process) needs to be subject to the criterion of 'value for money'. An excessively thorough process will have too many people taking too long to reach a decision on what to procure and from whom to procure. For example, what controls are in place to ensure that too much time is not spent on preparing justifications for losing bidders, rather than moving more quickly to award a contract? Not only does the process then fail the value for money test but, by tying up valuable personnel, it diminishes Defence's ability to achieve its objectives.

Many of the issues which industry claims increase the costs of tendering (which are covered in Chapter 7) also increase administrative costs for Defence. They include excessive detail, unreasonable delays and vaguely specified requirements.

Procurement policy and project managers seem to give inadequate attention to these aspects of value for money. There must be stronger incentives for policy managers and project teams to reduce the administrative costs of tendering, while still meeting the requirements of probity and public accountability. Defence is undertaking a study of the administrative costs of some 100 completed projects; and it considers that information will assist in developing performance measures, benchmarks and examples of best practice (Sub. D74, p. 3). Defence also recognises the need for comparisons with the private sector and internationally. Such comparisons depend for their success on appropriate project-based accounting, including full coverage of administrative costs.

8.5.1 Training procurement officers

There was a consistent view within industry that Defence procurement officers are poorly trained; do not appreciate the commercial imperatives of firms bidding for Defence business; and stay only a short time in their job, so that there is a lack of continuity and depth of experience in project teams.

Such complaints persist despite the Commission's understanding that a comprehensive training program is already in place for Defence personnel. In-house programs within the Acquisition and Logistics (A&L) organisation provide extensive training and education (including a Masters degree in project management) for procurement officers at all levels (advanced, intermediate and basic purchasing). In its recent White Paper, *Working Nation*, the Government announced increased funds for the training of procurement officials.

One way of reducing the costs resulting from relatively brief posting periods for military officers would be to adopt the approach taken by the UK Ministry of Defence which uses civilians if the project length is likely to run beyond the posting period.

Moving on from such civilianisation, further options would be to contract out part, or all, of the procurement process.

8.5.2 Contracting out the procurement process

The A&L Organisation provides a wide range of services to Defence, such as project management and contract management, some of which are similar to services offered widely by the private sector. Why should not some of these services be subjected to an assessment and tendering process just as has occurred under the Commercial Support Program? The cost reductions thus realised in activities such as aircraft maintenance at the Naval Air Station Nowra and base support at HMAS Penguin have been large (of 68 and 47 per cent respectively), because private contractors — subject to commercial imperatives — have greater incentives to adopt best practice.

Another approach would be to contract out significant parts of a procurement project. For example, there could be merit in using a specialist contracting team to negotiate final conditions of the contract. And specialist positions within a project team could be filled under contract: the Commission understands this has occurred in a few instances.

Little consideration seems to have been given to the possibility of contracting out the entire procurement process. That approach raises issues of how to provide the commercial contractor with an effective set of incentives, and how to maintain Defence's accountability for procurement expenditure. But such

problems are faced and resolved whenever any organisation contracts work. Allen Allen and Hemsley noted also that commercial firms contracting for government work must adapt to ensure that the relevant accountability and probity requirements are satisfied (Sub. D81, p. 8).

AEEMA put the view that industry would not have the same degree of confidence in the probity of a procurement process administered by outsiders as it does in internal Defence administration (Sub. D75, p. 7). In contrast, as noted by Allen Allen and Hemsley, there can be clear benefits in having the procurement process administered by 'an independent third party, free of fear and favour and conflicts of interest' (Sub. D81, p.6).

Transfield Shipbuilding said that, drawing on its considerable expertise in major procurement projects, it would welcome the opportunity to manage the procurement process itself for particular projects (Sub. D79, p. 2).

The Commission accepts that the contracting out of such tasks would require the progressive accumulation of experience within Defence (and industry). Thus, it would need to be a gradual process with Defence starting with trials of less complex examples, preferably of different types (such as facilities construction and capital equipment). Management from the RFT stage may be appropriate so that the contractor's job would be limited to implementing decisions already made by Defence.

Selected trials would test the viability of the approach and gauge the extent of potential benefits which, based on most experiences with contracting of work outside an organisation, could be substantial. And even if the approach were to prove of limited applicability, selected trials would have the important benefit of giving Defence some benchmark of administrative costs against which it could compare its costs, and a basis on which to strive for improved performance.

The Commission recommends that, in order to improve the efficiency of the procurement process and to provide a benchmark for its in-house administrative costs, Defence contract out the procurement process for a few selected projects.

9 ECONOMY-WIDE AND INDUSTRY DEVELOPMENT IMPACTS OF DEFENCE PROCUREMENT

Although Defence procurement has a relatively small impact on the Australian economy as a whole, it is important for particular industry sectors and individual firms.

This chapter looks at the impact of defence procurement on the Australian economy generally, and on the development of Australian industry. Emphasis is given to the impact on defence-related industry sectors such as shipbuilding and repair, aerospace, electronics and communications, engineering and the information technology industries.

The chapter draws on previously published information about economy-wide and industry development impacts. In addition, the Commission has used its ORANI model to estimate the defence procurement impact on the economy (also see Appendix G), and has undertaken a survey of selected firms to gather information about industry development impacts (also see Appendix H).

9.1 Economy-wide impact

Many participants in this inquiry drew attention to the impact of defence procurement on the economy as a whole. For example, the Victorian Government noted that:

> [defence procurement] stimulates employment, investment, and value added in the country, encourages technology transfer, helps improve workforce skills and productivity, expands the use of high quality standards and of positive perceptions of the quality of Australian products, it helps replace imports and expand exports so improving our balance of trade and economic prosperity. (Sub. 50, p. 13)

9.1.1 Defence procurement — a small part of the Australian economy

The above quotation shows that there are a number of possible ways to assess the economy-wide impact of defence procurement. However, some are more amenable to measurement than others. Some broad statistical measures are: the relative size of defence procurement in the economy; the proportion spent in Australia; the distribution (concentration) of defence expenditure between

industries; and the contribution defence-related exports make to the nation's trade.

In 1994-95 Defence will spend an estimated $4.7 billion on equipment, stores, facilities and other goods and services — see Table 2.1. Although this is a large sum, and makes Defence the largest Commonwealth purchasing agency, its total procurement will represent only about 1 per cent of Australia's gross domestic product (GDP) in 1994-95. About 70 per cent of defence procurement expenditure, including expenditure on capital equipment and on facilities, will be spent in Australia.

About 25 per cent of defence procurement expenditure goes to the shipbuilding industry, with another seven industries receiving between 2 and 8 per cent each (see Table 9.1). The remaining 40 per cent is spread widely across the economy.

Table 9.1: **Major suppliers of goods and services to Defence 1992-93**

	1992-93 database	
Commodity	*% of total defence procurement*[a]	*sales to Defence as % of value of turnover*[b]
Ships and boats	25.3[c]	65.0
Construction	8.0	1.0
Aircraft	5.5	8.0
Business services nec	5.6	0.7
Electronic equipment	4.8	3.2
Petroleum, coal products	4.4	1.3
Chemical products nec	2.7	5.6
Electrical	1.8	0.5
Other	41.9	0.3

[a] Defence expenditure on materials and capital goods, ie excluding Defence personnel.
[b] Based on value of turnover for 1991-92 (ABS 1994).
[c] This includes inputs from other industries as follows: Electronic equipment (6.5 of the 25.3), Electrical (4.1) and Business services nec (3.0).
Sources: ORANI updated database based on Defence Annual Reports, Budget Papers, ABS 1990, ABS 1994.

Defence-related exports are small: in 1992-93 only $46 million or about 0.1 per cent of Australia's total exports — see Table 9.2.

Table 9.2: **Defence-related exports**

Year	*Defence-related exports ($m)*	*Proportion of GDP (%)*	*Proportion of total exports (%)*
1991-92	90.8	0.02	0.15
1992-93	46.3	0.01	0.08

Source: Defence, Export of Defence and Related Goods from Australia, Annual Report 1992-93, p.19; ABS Cat No 5204.0 and Cat No 5302.0.

In summary, based on these broad statistical measures, the economy-wide impact of defence procurement is relatively small.

9.1.2 What the studies show

This section summaries the findings of various studies about the economy-wide impact of defence procurement, or of particular procurement projects. The findings differ markedly. This is because of differences in scenarios, assumptions, methodology, and data employed. In particular, the studies differ in what they assume about how defence procurement is funded — for example, by increasing the government deficit (as in the Allen study), or by diverting expenditure from other areas (as in the NIEIR and ORANI studies), and about what constraints apply to labour and capital resources. Appendix I describes the differences between the various types of studies in more detail.

ANZAC ship project study

A Victorian Government consultancy report (completed by the NIEIR in 1989) examined the impact of the ANZAC ship project proposal (as it then was) on the national, state and regional economies compared with a scenario of importing the eight frigates from Germany. The state and regional impacts are reported in Chapter 10.

The study showed a net positive impact on GDP growth, employment, and the current account (see Table I1 in Appendix I). NIEIR concluded that:

> As the project reaches and maintains peak production, in the 1994 – 2002 period, in a typical year, net GDP growth generated by the project is around 0.10 per cent, net employment generation averages around 7300 jobs, and the current account deficit, as a percentage of GDP decreases by 0.02 per cent. As the project winds down in the 2003 – 2005 period so too do these economic impacts. (Sub. 50, annex p. 24).

Allen input-output study

An Allen Consulting Group study, commissioned by Defence in 1992 for the Price review, assessed the impact of a $100 million across-the-board increase in defence purchases on the Australian economy. The study was based on 1986-87 data.

The Allen study reported two quite different outcomes under differing assumptions. Without a labour constraint — the short-run analysis — the $100 million increase in defence expenditure resulted in an increase in GDP of $65 million. The second scenario — the long-run analysis — superimposed a constraint of unchanged national employment on the short-run results. Thus, in the long-run analysis, simulation of growth in employment in any particular sector of the economy will ultimately be at the expense of growth in employment in other sectors. In this case, Allen found the $100 million increase in defence spending resulted in an overall decline in real GDP of $3 million.

Commission's general equilibrium (ORANI) study

To assist in illustrating the possible impacts of defence procurement on the Australian economy, the Commission's ORANI model (see Appendix G) was used to examine three hypothetical scenarios — see Table 9.3. These scenarios are not suggestive of current policy nor are they put forward as policy alternatives.

Table 9.3: **Economy-wide impacts of defence expenditure**

Scenario	*real GDP (% change)*	*Net imports ($m)*
More expenditure on aircraft, less on ships	*	215
More capital equipment, less personnel expenditure	*	220
Buying more in Australia:		
Short run:	0.2	-570
Long run:	*	150

* between -0.05 and 0.05.
Source: 1994 ORANI projections.

Spending more on aircraft and less on ships

This scenario explored the economy-wide impact of changes in the composition of defence expenditure. It involved a reduction of expenditure on ships (down

60 per cent on current levels of expenditure) and an increase on aircraft (up by 160 per cent on current levels of expenditure).

The long-run impact on both GDP and the balance of trade was negligible.

Increasing capital equipment expenditure

This scenario involved increasing the capital equipment share of total defence spending from 25 per cent (its current level) to 35 per cent and reducing, by a corresponding amount, expenditure on defence personnel.

The results again showed no significant change to GDP and only a negligible impact on Australia's balance of trade.

Buying more in Australia

This scenario looked at the impact of Defence buying more of its requirements in Australia, by modelling a $1 billion switch from imports.

The results indicate there would be benefits in the short run (ie the scenario without the labour constraint). Real GDP would increase by some 0.2 per cent or approximately $740 million, and net imports would decrease by $570 million.

However, in the long-run scenario (where a labour constraint was assumed to apply), Australia's net imports would actually increase and there would be negligible change in real GDP. Appendix G explains why the short and long run results differ.

Several participants (the WA Department of Commerce and Trade, Rear-Admiral Rourke, and Transfield Shipbuilding) claimed that the ORANI long-run labour constraint assumption was inappropriate. They argued that an expansion in Defence activity need not result in labour being drawn away from other sectors because labour resources were already available in times of high unemployment, or could be retrained, and/or the skills could be imported. The Commission acknowledges that in these situations an expansion in Defence activity would not be entirely at the expense of other sectors. However, according to the model, given a return to lower levels of unemployment, stimulation of growth in a particular sector of the economy, such as defence, would ultimately be at the expense of growth in employment in other sectors.

9.2 Industry development impact

Although the economy-wide impact of defence procurement appears not to be significant, the impact on particular industries and individual firms is important. For example, in the 1992-93 figures used in the ORANI database, defence

procurement accounts for over 65 per cent of total shipbuilding industry sales, 8 per cent of aircraft sector sales and 6 per cent of chemical products sector sales (see Table 9.1). Further, defence procurement is important for the electronic equipment and electrical industries, which are major suppliers of inputs to the shipbuilding and aircraft industries.

9.2.1 What the studies show

This section summarises the findings of various studies about the industry development impact of defence procurement. As for the economy-wide studies, the results differ markedly reflecting differences in scenarios, assumptions, methodology, and data used — see Appendix I for more detail.

Allen input-output study

The Allen study assessed the impacts of a $100 million increase in defence purchases targeted at a specific industry sector. This was undertaken separately for ordnance, vehicles, shipbuilding, aerospace, and electronics.

In the short run, without a labour constraint, GDP increased in every case. The impact was largest in shipbuilding: a $100 million boost in Defence purchases resulted in a $41 million rise in employment and a $67 million boost to GDP. This is because shipbuilding has the lowest import content ($39 million) and the highest labour intensity of the five industries — see Table 9.4. In contrast, electronic equipment gave the lowest boost to GDP ($29 million) and employment ($13 million) because of its high import content ($77 million) and capital intensity.

Table 9.4: **Short-run industry impact of an expenditure increase of $100m in a targeted industry($m)**

Targeted industry	*Employment*	*GDP*	*Imports*
Ordnance	28	63	43
Vehicles	29	54	52
Shipbuilding	41	67	39
Aerospace	22	36	70
Electronic equipment	13	29	77

Source: Allen Consulting Group 1992a, p. 112.

However, with the labour constraint added (the long-run simulation), the study showed that the impact on GDP could be positive or negative (see Table 9.5). Increased spending on shipbuilding resulted in a fall in GDP of $19 million. The study noted that this is because 'the national capital stock declines as the result of shipbuilding drawing labour away from capital-intensive industries' (Allen Consulting Group 1992a, p. v). In contrast, ordnance is relatively capital-intensive and does not need to draw as much labour away from other industries in order to expand production. The study showed a $100 million increase in defence spending on ordnance would yield a $5 million increase in GDP.

Table 9.5: **Long-run industry impact of an expenditure increase of $100m in a targeted industry($m)**

Targeted industry	*Employment*	*GDP*	*Imports*
Ordnance	0	5	33
Vehicles	0	-7	41
Shipbuilding	0	-19	23
Aerospace	0	-10	62
Electronic equipment	0	3	72

Source: Allen Consulting Group 1992a, p. 112.

Commission's general equilibrium (ORANI) study

The ORANI scenarios described above also give estimates of the impact of defence procurement on particular industries — see Table 9.6.

Spending more on aircraft, and less on ships

In this scenario, the changes in output and demand for labour in aircraft and shipbuilding reflect the direct impact of the switch in defence expenditure. Industries that are important suppliers to defence-related shipbuilding, with their relatively high local content, such as those supplying electronic and electrical equipment, experience declines in activity due to the reduction in domestic production of ships.

Increasing capital equipment expenditure

In this scenario there is an across-the-board increase in activity in the major supplying industries.

Table 9.6: **Industry-specific impacts of defence expenditure (per cent change)**

Scenario	*Industry*	*Output*	*Demand for labour*
More expenditure on aircraft, less on ships	Electronic equipment	-1.8	-1.8
	Electrical	-0.6	-0.6
	Aircraft	14.0	14.0
	Ships and boats	-25.4	-16.2
More capital equipment, less personnel expenditure	Electronic equipment	1.8	1.8
	Electrical	0.8	0.8
	Aircraft	1.8	1.9
	Ships and boats	8.8	8.8
Buying more in Australia:			
Short run:	Electronic equipment	4.2	5.0
	Electrical	2.9	3.3
	Aircraft	12.2	13.1
	Ships and boats	-0.1	-0.1
Long run:	Electronic equipment	4.3	4.2
	Electrical	2.7	2.7
	Aircraft	12.2	12.2
	Ships and boats	-0.1	-0.1

Source: 1994 ORANI projections.

Buying more in Australia

There is little change in the shipbuilding sector as Defence requirements are already sourced almost entirely from Australian primary contractors. But there

are some marked increases in activity and employment of other major suppliers to Defence.

9.2.2 Industry-by-industry assessment

The terms of reference request the Commission to examine the impact of defence procurement on particular industries such as shipbuilding, aerospace, electronics and engineering.

In responding to that request, this section draws on the findings of the Commission's survey of defence-related firms (see Appendix H), an earlier Allen Group survey and report, submissions, and several industry studies.

There are some difficulties in lining up the industries specified in the terms of reference with industry descriptions used in ORANI and in other quantitative studies (see Box 9.1). This does not, however, affect the validity of the information presented in this report.

The Commission's survey

As part of the Price review, the Allen Consulting Group sought 1990-91 data from 60 firms with defence work in shipbuilding and repair, aerospace, electronics and communications, information technology, vehicles, ordnance or clothing. The Commission has surveyed those firms again, as well as firms which attended public hearings or made submissions to the inquiry, and firms visited by the Commission. The purpose was to update information to 1992-93, to seek regional information, and to gather more particular data about electronics. A total of 62 firms were surveyed, of which 46 responded.

The Commission sought data for 1992-93 on defence sales, employment, exports and research and development. Of the firms which responded, defence-related work on average accounted for:

- 36 per cent of revenue;
- 34 per cent of employment;
- 7 per cent of exports; and
- 57 per cent of their research and development expenditure.

Further survey results are presented in the following sections, and in Appendix H. Some results have not been reported for reasons of confidentiality.

Shipbuilding and repair

As noted in Table 9.3, Defence is the major purchaser in the Australian shipbuilding industry. Three companies dominant at present: Transfield

Shipbuilding which has the $5.3 billion ANZAC frigate contract, the Australian Submarine Corporation (ASC) which has the $4.8 billion Collins Class submarine contract and Australian Defence Industries (ADI) which has the $1.0 billion coastal minehunter contract.

However, the ultimate impact of defence procurement in this sector is widely dispersed throughout the economy, as much of the value of frigates and submarines, for example, consists of components and inputs sourced from other industries. This is reflected in the role played by subcontractors. Around 80 per cent of the value of the submarine project is being subcontracted (Sub. 24, p. 4), and over 1000 subcontractors and suppliers are involved in the ANZAC ship project (Sub. 51, p. 2).

Box 9.1: **Lining up industry definitions**

In order to measure the impact of Defence spending on the economy, it is necessary not only to have details of Defence spending on each activity, but also details of these activities in all industries as a proportion of total economic activity. The Australian Bureau of Statistics compiles detailed data of this nature; these data are categorised into the 4 digit Australian Input–Output Commodity Classification (IOCC). Therefore, the impact of a particular activity on the economy can be assessed (using quantitative economic models reliant on these data such as the Commission's ORANI model) if the activity that is being scrutinised concords with a particular IOCC category.

For shipbuilding, aerospace and electronics, there is a reasonable concordance between these activities and IOCC industries. Shipbuilding fits into the 'Ships and boats' industry. Aerospace corresponds with the 'Aircraft' industry. Electronics corresponds in part with 'Electronic equipment'; however, some activities under the umbrella of electronics could be included in the 'Electrical industry', which includes such items as electric cables, electric motors, generators, and magnetos. In addition, not all computing items fit into the 'Electronic equipment' industry; computing hardware does, but computing software is included in the 'Business services nec' industry.

Engineering is not placed into a particular IOCC industry. A simple explanation for this is that engineering is a specialist skill that is a key component of a number of industries. For example, engineering is a vital component of shipbuilding, aerospace and electronics. Engineering may be captured in various inputs of relevant industries including labour.

The Commission was provided with commercial-in-confidence data by the Department of Defence that included an engineering classification. However, these data were confined to the submarine construction component of defence procurement. Even if engineering data were available for all procurement, this would not shed light on the impact of defence procurement on engineering in the economy, because details of the distribution and level of engineering activity in the rest of the economy would be necessary in order to make such an assessment.

The dependence of firms in this sector on defence work was highlighted in the Commission's survey — see Table 9.7. Of the firms surveyed, defence-related work accounted for 98 per cent of total sales and 81 per cent of total employment. Transfield Shipbuilding, ADI, and the ASC are heavily dependent on revenue from defence shipbuilding and repair projects. Defence sales are also significant for smaller firms (eg the Dawson Group, Delta Hydraulics) in this sector.

Table 9.7: **Defence in the shipbuilding and repair sector (1992-93)**

Indicator	*Unit*	*Total (of firms surveyed)*	*Defence-related*	*Defence-related as % of total*
Employment	No.	3856	3136	81
Revenue	$m	1252	1222	98

Source: 1994 Industry Commission survey.

Through defence contracts, Transfield Shipbuilding, ADI and the ASC have developed competitive capabilities in naval shipbuilding, repair and maintenance including project management, systems integration, engineering services and heavy engineering, as well as other capabilities related to electronics, information technology and military systems. As noted in Chapter 4, Transfield Shipbuilding is actively pursuing export markets on the basis of these capabilities. Similarly, many of the smaller subcontractors have developed defence-related shipbuilding support and fit-out capabilities.

An important issue is whether the shipbuilding sector can maintain and sustain the capabilities developed once current defence projects finish. Future defence spending for new naval capacity could be considerably less than at present, despite the anticipated new design, development and construction projects over the next 15 years including new minehunters, new hydrographic ships, replacement patrol boats, and modernisation of the FFGs (frigates). Local industry could be expected to receive ongoing repair and maintenance work.

Transfield Shipbuilding expressed concern that, unless it found other work, its competitive position would be affected with the expiry of the ANZAC ship project. This in turn would threaten its capability to support new ship design and construction. It observed that:

> Without a continuity of ongoing work, however, this internationally competitive facility would be diminished and future export potential lost. This would be due to the loss of engineering, project management and logistic support skills built up through the ANZAC Ship Project. (Sub. 10, p. 4)

However, there are opportunities for Australian shipbuilders in export markets. Transfield Shipbuilding, as noted, is pursuing opportunities in South-East Asia with assistance from Defence and the Australian Government. The company commented that:

> Defence procurement authorities are in a pivotal position to provide positive marketing support in overseas markets for major suppliers. A cooperative approach between Government and a supplier, as has occurred on the Malaysian Patrol Vessel Project, can be of immense value in assisting the export of goods and services. (Sub. 10, p. 4)

Aerospace

At present, Defence is neither a driving force in the aerospace sector, nor a dominant customer. Aerospace firms surveyed by the Commission indicated that around 16 per cent of their total revenue was derived from the sale of goods and services to Defence and that around 18 per cent of their employees were engaged in defence-related work — see Table 9.8. The two largest firms, Hawker de Havilland (HdH) and AeroSpace Technologies of Australia (ASTA) together accounted for around two thirds of the total defence revenue earned and provided over three quarters of the total employment.

HdH and ASTA are also major defence exporters together accounting for a significant proportion of the total defence-related exports of the aerospace firms surveyed.

HdH's major defence export activities are the repair, overhaul and maintenance of engines for Asian, US and Middle Eastern defence forces, engine component manufacture for the US Navy, and systems integration activity. ASTA's exports have included defence products such as Ikara, Jindivik and the Nomad aircraft.

There was some defence-related research and development investment reported, especially by HdH. But ASTA considered that the opportunities for defence-related research and development were limited:

> Limited industry opportunity to directly participate with Defence on new R&D programs, coupled with little desire to support industry in the engineering development for other markets, appears to now inhibit such opportunities. (Sub. 19, p. 10)

Table 9.8: **Defence in the aerospace sector (1992-93)**

Indicator	*Unit*	*Total (of firms surveyed)*	*Defence-related*	*Defence-related as % of total*
Employment	No.	4489	827	18
Revenue	$m	531	83	16
Exports	$m	300	39	13

Source: 1994 Industry Commission survey.

Over the past decade, the main defence procurement impact on this sector has been the F/A-18 project. This involved Australian industry in the production and assembly of 73 complete military aircraft.

A key feature of the F/A-18 project was the extensive industry development program which sought to:

> a. provide in industry the capability to undertake required engineering, maintenance and spares provision support for the aircraft, its systems, equipment and support facilities, during the life of the aircraft;
>
> b. establish, maintain or enhance the defence industry capabilities in general and provide a balanced stable on-going workload using the opportunities presented by the F/A-18 project. (Defence 1994b, pp. 21–2)

In addition, the designated work program and offsets were expected to generate further orders worth some $1100 million (1992-93 prices), new engineering, maintenance and manufacturing skills were to be developed, and additional sales were expected from the commercialisation of the acquired technologies and skills.

Offsets were a major feature of the program. US contractors were required to make use of local suppliers in the manufacture, assembly and testing of the aircraft and its components. They were also required to provide certain special tooling and test equipment to local industry for this purpose. Defence also invested around $124 million (1992-93 prices) in machinery, plant and buildings that were provided to industry on a rent free basis for use on F/A-18 work.

The F/A-18 project showed that Australian companies have the capability to produce and assemble complete military aircraft. The skills and capabilities developed also enabled Australian firms to win further and continuing orders. For example, ASTA noted that its:

> performance on F/A-18 flap manufacture has recently resulted in the winning of a sole source supplier position on the F/A-18 project — a somewhat unique position on a US military program. (Sub 19, p. 5)

Similarly, BTR Aerospace Australia noted that the F/A-18 experience formed the basis for the company winning other export aerospace work. This included:

> the offset work which we currently undertake for such companies as Boeing, General Electric, Pratt & Whitney, Aerospatiale and, for a period, British Aerospace. Without the upgraded facilities, negotiating and contracting skills acquired on the F/A-18 project, much of this work would not have been possible. The upgrading of skills and capabilities opened up substantial new markets to us, particularly in the second half of the 1980s. (Sub 15, Appendix B, p. 4)

However, Australia's defence aerospace capability was developed at a cost. A recent Defence review of the F/A-18 industry program (Defence 1994b) estimated that a $713 million cost premium in 1992-93 prices (relative to the international market) was paid for that capability.

The review also found that some of the expected industry benefits were not realised. For example, because follow-on maintenance work went to the RAAF rather than to industry, some of the key capabilities were underutilised. As well, industry had been largely unsuccessful in commercialising the acquired skills and technologies. Participants confirmed these findings. For example, ASTA noted:

> It is unfortunate that Australian industry has had little opportunity to directly transfer their F/A-18 know-how gained (and presumably paid for by the premium) to Defence through participation in the maintenance of the F/A-18 fleet, as this premium would have been amortised over a much larger workload and timeframe to the benefit of Defence. (Sub 19, p. 5)

Thus, while the F/A-18 industry program has no doubt benefited the Australian aerospace industry, and a defence capability has been developed, there is a question about its overall value. For example, in its contribution to the 1992 Price Report, the Department of Industry, Technology and Commerce noted:

> the extent to which Defence offsets business resulted in long term business opportunities for Australian industry is more questionable. It is difficult to assess whether that business has been worth the estimated premium of up to 15% of the project cost on something like the F/A-18 aircraft. (DITAC 1992, p. 48)

Since the end of the F/A-18 project, defence spending in Australia on aircraft production has declined and, in recent years, defence work has not been a major focus for the industry. However, over the next six years, defence expenditure on

aircraft is envisaged to increase by around 160 per cent on current levels. Anticipated new projects include the airborne early warning and control aircraft, lead-in fighters, tactical airlift capability, and the F/A-18 upgrade.

Electronics and communications

The Australian electronics and communications sector (including the firms providing software support) has high strategic value in contributing to surveillance, intelligence and related capabilities (see the *Strategic Review 1993*). Defence has played a key role in encouraging the development of this sector.

Firms engaged in defence-related electronics work form a distinct subset of the total electronics industry, the Commission's survey showing them to have a relatively high dependence on defence work — see Table 9.9. Of the firms surveyed, defence-related sales accounted for 53 per cent of total sales and defence-related employment for 60 per cent of total employment.

A third of the firms surveyed exported defence-related products. These were valued at around $33 million in 1992-93, representing 45 per cent of their total exports. British Aerospace Australia (BAeA) accounted for a large share of these exports.

Over half of the research and development undertaken by the firms surveyed was defence-related.

Table 9.9: **Defence in the electronics and communications sector (1992-93)**

Indicator	*Unit*	*Total (of firms surveyed)*	*Defence-related*	*Defence-related as % of total*
Employment	No.	4524	2701	60
Revenue	$m	889	470	53
Exports	$m	74	33	45
R&D	$m	34	19	56

Source: 1994 Industry Commission survey.

Over the past decade, the main defence impact on the sector has been through the purchase of electronic equipment associated with naval vessels, aircraft and rocket systems, surveillance and signal processing systems, specialised communications networks, and specialised software systems. Important

opportunities for the electronics and communications sector come with major projects such as ANZAC frigates, Collins Class submarines and Jindalee Over the Horizon radar.

Participants highlighted the key role Defence has played, and continues to play, not only in the development of many companies in this sector, but also in the introduction of new technology to the industry and economy as a whole.

Morris Productions, for example, considered that certain printed circuit board (PCB) technology, now widely used throughout industry, had been introduced into Australia initially to meet defence requirements:

> Defence work has been instrumental in introducing three major PCB technologies to the Australian PCB manufacturing industry:
>
> - Multilayer PCBs
> - Surface mount PCBs and
> - 100% Electronic test ...
>
> Each of these innovations was first developed in Australia by Morris as a result of Defence requirements ... These are now widely accepted technologies in Australia for both defence and commercial electronics work, and together represent over 50% of Morris' PCB sales. (Sub. 20, p. 6)

The developmental impact of defence procurement on firms in this sector was illustrated by BAeA which noted:

> The development of indigenous technology, industry skills, and strong international industrial relationships, facilitated through BAeA's involvement in Australian defence procurement have, and will continue to have, a significant positive impact on BAeA's ability to grow, diversify its customer base, increase its exports and offer strongly competitive goods and services. (Sub. 23, p. 7)

BAeA pointed to its success with the *Quiktrack* system (which remotely identifies, tracks and communicates with vehicles) as an illustration of how it had been able to capitalise on its high technology defence base to develop new business opportunities. BAeA noted that:

> skills in project management of complex engineering development programs, its precision manufacturing and production engineering skills, electronic and software skills, Integrated Logistic Support methodologies, design product assurance and product qualification disciplines were instrumental in facilitating this business opportunity. These skills have been developed within BAeA as a result of the Company's involvement in Australian defence procurement activities. (Sub. 23, pp. 7–8)

Yet some participants expressed concern about the sustainability of the defence electronics industry because of factors such as the availability of off-the-shelf products, cheaper imports and the project-related basis of defence procurement.

In commenting on off-the-shelf purchase, the Australian Electrical and Electronic Manufacturers' Association (AEEMA), for example, noted:

> Defence has had a history of purchasing imported products 'off-the-shelf' at low prices, with little attention or commitment to Australian industry despite the stated intention of such programs as the AII [Australian Industry Involvement]. By buying products off-the-shelf Australian capabilities are not developed in such areas as design, development or production.

and, as a consequence:

> significant disinvestment has occurred in the defence electronics industry, particularly in respect of indigenous capabilities where it has not been possible to maintain investment in the face of dwindling volumes of work. (Sub. 22, p. 9)

Morris Productions expressed concern about the future of PCB manufacture in Australia because of cheaper imports. It argued there were strategic ramifications because PCBs represent the 'wiring harness' or interconnection of all other electronic components, and the loss of leading edge PCB manufacture in Australia would in turn damage Australia's ability to design, manufacture and maintain most defence equipment.

The project-related basis of defence procurement was also a concern to some. Thomson Sintra Pacific commented that:

> the companies which have been involved in these [major defence procurement] projects are now going through a difficult period. Because the decisions and the investments were made on a project oriented basis, there is little reason to justify their long term presence in the industrial landscape of Australia when the project is successfully finalised. (Sub. 35, p. 1)

Some firms reported that they were aiming to reduce their reliance on defence work. However, the specialised nature of these firms could be a barrier to their development of civil work. Rockwell Systems Australia noted that:

> in part these endeavours have been hampered by management structures geared to meeting unique Defence needs. These structures create costs which are frequently non competitive when bidding for commercial business. Also the mind set of employees experienced in Defence programs quite often is not that needed by staff bidding for and working commercial opportunities. (Sub. 25, p. 2)

The defence electronics sector is highly competitive. The current industry structure has developed in a way that makes it susceptible to wind-downs in particular Defence contracts. In turn, some industry capabilities may be vulnerable in the event of industry rationalisation.

Engineering

Several participants suggested that defence-related industries could be treated as part of a systems engineering industry, rather than in traditional product

categorisations such as aircraft and shipbuilding. For example, the South Australian Government noted:

> given that the global rationalisation of the aerospace industry now leaves very few vertically integrated aircraft manufacturers and the production of aircraft has turned into a systems process, can what is left in Australia be described as an Aerospace Industry? Likewise, the development and manufacture of both Anzac Ships and Submarines should be seen more as a specialised System Engineering effort. (Sub. 53, p. 7)

Similarly, Transfield Shipbuilding noted that:

> although the ANZAC Ship Project is classed as shipbuilding, the benefits to industry range far more widely, including for example, software, electronics, training and project management, as well as shipbuilding. Thus the benefits of a major defence project range through a number of industries and it is misleading to limit them to one. (Sub. D79, p. 4)

The Commission acknowledges that systems engineering and integration has become an important part of defence-related industries such as shipbuilding, aerospace, and electronics and communications. However, this does not rule out the usefulness of a product-based categorisation in assessing industry development impacts of procurement, particularly given the difficulty of presenting structural data about engineering activity (see Box 9.1).

Information technology

Defence sources its information technology (IT) requirements from a few large companies and a multitude of smaller ones. The largest suppliers are IBM, DEC, and Unisys. The Australian firms Computer Power and Mincom supply systems integration and software services.

The Commission's survey showed that defence work constitutes only a small part of the overall activity of firms surveyed — see Table 9.10. For example, defence-related sales accounted for only 6 per cent of their total revenue in 1992-93. However, some of the smaller individual firms (eg Techway) are highly geared to defence work.

Similarly, defence-related employment accounted for only 3 per cent of total employment. None of the firms surveyed reported defence-related export sales in 1992-93, although there was some defence-specific research and development reported.

Table 9.10 **Defence in the information technology sector (1992-93)**

Indicator	*Unit*	*Total (of firms surveyed)*	*Defence-related*	*Defence-related as % of total*
Employment	No	8220	227	3
Revenue	$m	2782	154	6
Exports	$m	752	0	0
R&D	$m	170	23	14

Source: 1994 Industry Commission survey.

In recent years, the main defence procurement impact on this sector has been through the Defence EDP Systems Integrated Network Environment (DESINE) project and the Supply Systems Redevelopment Project (SSRP) project:

- The $367 million DESINE project terminated in 1994 and involved IBM Australia (as the prime contractor) and 28 subcontractors supplying Defence with computing equipment and maintenance and support services.
- The $438 million SSRP project is scheduled for completion in 1998. It aims to provide the ADF with an efficient and effective computer-based supply system. The Australian firm Mincom is the major supplier.

Overall, defence procurement has little impact on development in this sector. Although Defence spent around $200 million in this sector in 1992-93 (about one-third of total Commonwealth IT procurement — see HORSCIST 1994, p. 180), it is a relatively small buyer in the Australian IT market. Defence largely follows developments in the civilian market and much of the technology and component parts are imported. As noted by Techway:

> In the larger scheme of the worldwide IT industry, the particular requirements of the Australian Department of Defence will have little impact on the design and development of imported computing products. (Sub. 11, p. 2)

Defence procurement does have an impact, however, on the development of individual firms in the sector. For example, Techway noted that the DESINE project had encouraged it to:

> transform from a boutique manufacturer of small volumes of computer products to a company capable of locally manufacturing a range of world-class PC products which are competitive with overseas assembled alternatives in terms of quality, performance, reliability and price. (Sub. 11, p. 2)

In summary, although Defence may have a developmental role as a customer demanding high standards and quality, overall it is not a driving force in determining development in this sector.

9.3 Summary

Defence procurement has a relatively small impact on the Australian economy as a whole. The various studies and simulations summarised in this chapter show that changes in the level and composition of defence procurement have a negligible aggregate impact on the economy.

However, it is important for particular industry sectors and individual firms. At present, for example, about two thirds of the output of the shipbuilding industry is defence-related.

Concerns have been expressed by industry participants, particularly in the shipbuilding and electronics sectors, that changes in the level and composition of defence procurement could adversely affect particular sectors and firms. The aerospace sector is already suffering from a decline in defence work.

Although an appreciation of the economy-wide and industry development impacts of defence procurement is important to sound decision making, the Commission considers that there is no justification for using defence procurement specifically to pursue industry development or economy-wide goals — see Chapter 4.

10 REGIONAL IMPACTS OF DEFENCE PROCUREMENT

Although changes in the composition and sourcing of defence procurement have minimal economy-wide impacts, defence procurement itself can have significant regional effects. But to use defence procurement deliberately to foster regional development could be inconsistent with seeking value for money, reduce effective competition and fragment industry capabilities.

This chapter looks at regional impacts of defence procurement. Large defence projects, such as ANZAC ships and the Collins Class submarines, can have significant regional impacts. Tenderers for such projects have often made location a feature of their bids. And state governments are often involved in lobbying for major projects to be based in their regions. The location of major defence bases — and the relocation of significant parts of the ADF from south eastern Australia to the north and west — also have regional effects. This chapter summarises available information about the regional impacts of defence procurement and examines whether these impacts should be taken into account in making procurement decisions.

10.1 Overview of direct impacts

Comprehensive information about the direct regional impacts of aggregate expenditure on major defence capital equipment procurements is not available.

However, some information is available on the regional impacts of specific equipment projects. Details of expenditure by state for the ANZAC ship project and the Collins Class submarine project are shown in Table 10.1. Substantial proportions of the work associated with each project are undertaken outside the state of location of the prime contractor; Victoria for the ANZAC ships and South Australia for the submarines. In the case of the ANZAC ships, for example, it would be more accurate to say that they are being assembled, rather than being built, in Melbourne.

Table 10.1: **Distribution of planned project expenditure, by state, ANZAC ship and Collins Class submarine projects**

State	*ANZAC ship project*[a]		*Collins Class submarine project*[b]	
	$m	*%*	*$m*	*%*
Victoria	1 576	38	138	6
NSW	893	21	522	23
SA	652	16	1 372	62
ACT	344	8	36	2
Queensland	44	1	11	0
WA	19	0	16	1
Tasmania	6	0	2	0
Other[c]	..	0	134	6
Total Aust. content	*3535*	*84*	*2 231*	*100*
NZ content	665	16	0	0
Total ANZ content	**4 200**	**100**	**2 231**	**100**

Note: All prices in Australian dollars. .. Less than $100 000. a December 1993 prices. b June 1986 prices. c Includes all expenditure which cannot be readily attributed to a particular State.
Source: Sub. 52, p. 2.

Table 10.2: **Capital facilities expenditure by state and region, 1993-94**

State and region	*Budget estimate*	*Propn. of total*
	$m	%
Sydney	93.0	26
Singleton	19.1	5
Wollongong	6.9	2
Wagga	3.3	1
Nowra	2.0	1
Newcastle	0.4	..
Total NSW	*124.7*	34
Darwin	53.2	15
Tindal	22.8	6
Total NT	*76.0*	21
Melbourne	18.6	5
Bandiana/Bonegilla	12.8	4
Puckapunyal	12.3	3
Cerberus	5.8	2
East Sale	3.0	1
Total VIC	*52.8*	15
Perth	32.8	9
Kurtin	1.2	..
Karratha	0.8	..
Geraldton	0.4	..
Total WA	*36.9*	10
Townsville	8.8	2
Scherger	6.9	2
Brisbane	4.4	1
Oakey	4.1	1
Canungra	0.9	..
Amberley	0.6	..
Total Qld	*26.0*	7
Adelaide	19.1	5
Port Wakefield	1.0	..
Total SA	*20.1*	6
Canberra	9.2	3
Total ACT	*9.2*	*3*
Hobart	0.7	..
Total TAS	*0.7*	..
Other[a]	*16.3*	*4*
TOTAL	362.7	**100**

.. Less than 1 per cent. a Not able to be apportioned among the states.

Source: Defence 1993b, pp. 609–19.

10.1.1 Regional impacts of facilities expenditure

Estimated expenditure in 1993-94 by Defence on capital facilities by state and region is shown in Table 10.2. While the direct impacts will usually be captured by the region in which the facilities are built, some services (eg the architectural design and planning stage) may be provided from outside the region.

As the data show, defence spending on capital facilities is concentrated in and around Sydney; in Darwin and Tindal in the Northern Territory, in support of the Army Presence in the North (APIN) project and the RAAF's northern bases program; and in and around Cockburn Sound near Perth where the Indian Ocean base for the Navy is being constructed to implement the Government's 'two oceans' policy.

10.1.2 Industry Commission survey

The Commission sought information on the regional impact of defence procurement from 62 selected defence suppliers of capital equipment. Of these, 46 firms, which operate 113 establishments around Australia, responded. The regional results of the survey are summarised in Table 10.3. All information relates to the 1992-93 financial year. (For more detail about the Commission's survey, see Appendix H.)

Table 10.3: **Survey information 1992-93**

		Employment			*Sales revenue*		
State	*Number of establishments*	*Defence related*	*Total*	*Dependence on defence*	*Defence related*	*Total*	*Dependence on defence*
		No.	No.	%	$m	$m	%
NSW	28	3 645	10 001	36	504	2 517	20
VIC[a]	24	2 210	7 462	30	689	1 657	42
QLD	13	187	1 206	16	25	198	13
WA	14	183	1 349	14	21	200	11
SA	16	2 227	3 264	68	791	1050	75
ACT	18	288	2 161	13	152	461	33
Total	**113**	**8 740**	**25 443**	**34**	**2 182**	**6 084**	**36**

[a] Includes data for Tasmania.

Source: Industry Commission 1993.

Employment in defence work among respondents was highest in New South Wales, South Australia and Victoria. The survey did not include firms in the construction industry, and so does not include work undertaken on defence facilities in Western Australia and the Northern Territory. If construction activity had been included, the data for Western Australia and the Northern Territory would have been higher.

Revenue from defence work accounted for a significant share of total sales revenue for respondents in South Australia, Victoria, the ACT and New South Wales in that order.

In the case of South Australia, the figures reflect the involvement of establishments in the submarine and frigate contracts, and the relative specialisation in higher value added defence-related activities such as information technology and electronics. Defence-related employment and sales revenue were high too in New South Wales and Victoria where a large

proportion of the work associated with the frigate and submarine projects is also being undertaken.

The relatively high dependence on defence-related sales revenue for establishments in the ACT reflects the nature of the companies concerned (some in the high technology areas), and the way in which respondents attributed their sales on a regional basis.

10.2 Examples of regional impact studies

Several studies have sought to estimate and analyse the regional impacts of defence procurement. As for the studies summarised in Chapter 9, the results of these studies are not comparable because of differences in the scenarios, assumptions, methodology and data used (see Appendix I).

10.2.1 The ANZAC ship project

In 1989, the National Institute of Economic and Industry Research (NIEIR) prepared a study comparing the economy-wide, state-wide and regional impacts of the then proposal to build 12 ANZAC frigates (8 for the RAN and 4 for the RNZN), with those of a proposal to import 8 frigates for the RAN from Germany. The economy-wide impact estimates were outlined in Chapter 9.

The state and regional impacts of the study are outlined below. However, because of their method of estimation, the state and regional results are not comparable.

State impacts

The state impacts of building the frigates in Australia were estimated for a typical year, between 1993 and 2002, when production would be at its peak. Output in Victoria was estimated to rise by 0.15 per cent, in New South Wales by 0.11 per cent, and in South Australia by 0.23 per cent. Employment was estimated to rise by 2880 in Victoria, 2690 in New South Wales, and 1370 in South Australia.

According to NIEIR, the net impact of the construction phase on the other states:

> is virtually neutral, although it should be noted that Western Australia would benefit from supplying some components and from flow-on work in the refit and maintenance of the frigates. (NIEIR 1989, p. 26)

Regional impacts

Under the domestic sourcing proposal, an average of 510 jobs would be created at the facilities where the frigates were to be built, in the western region of Melbourne, over the period from 1992 to 2003. NIEIR regional analysis estimated that, for every new job created at these facilities, indirect employment in the region would increase by 0.8 jobs in the retail, wholesale, services and education sectors. From this, NIEIR estimated that:

> in the 1992 – 2003 period, activity at AMECON facilities would, on average, generate about 950 jobs in the Western Region [of Melbourne] with a similar impact in Newcastle. (NIEIR 1989, p. 23)

Subcontractors and other suppliers of goods and services associated with the ANZAC ship project were expected to create an additional 150 jobs, directly and indirectly, in the western region of Melbourne.

10.2.2 The economic impact of Defence-related activity on the South Australian economy

In an input-output study of the impact of Defence on the South Australian economy prepared in 1993 by Burgan, Mules and Molloy (Burgan et al) for the Economic Development Authority of South Australia, defence spending was separated into spending on defence projects, and spending on defence installations.

Nine major defence projects were included by the authors: Collins Class submarines, P3C refurbishment, Project JORN, ANZAC frigates, Project NINOX, light armoured vehicles, small arms replacement, Project Parakeet, and Project AUSTACCS. The Defence facilities included the Army, Navy and Air Force Bases located in South Australia, the Defence Science and Technology Organisation at Salisbury, and the defence facilities at Woomera and Narrungar.

Two different scenarios were modelled for defence projects, and two for defence installations. In the case of projects, the ‘low’ scenario assumed all expenditure on defence projects was captured by the survey undertaken for the study, and State and Commonwealth Governments did not spend any of the money collected through taxes (eg payroll tax, federal income tax) associated with the projects. The ‘high’ scenario assumed the survey failed to capture 20 per cent of the total expenditure on defence projects, and governments spent all the money collected through taxes, providing a further stimulus to the economy. In the case of installations, the ‘low’ scenario assumed taxes were not spent; the ‘high’ scenario assumed they were. The results are shown in Table 10.4.

Adding the impacts of defence projects and defence installations together, the study indicated that defence-related spending would add around 2 to 3 per cent to South Australia's gross state product in 1993, and would 'create' employment in South Australia equivalent to around 4 to 5 per cent of South Australia's labour force.

Table 10.4: **The impacts of defence projects and installations on Gross State Product and employment in South Australia, 1993**

	Gross State Product				*Employment*			
	Low scenario		*High scenario*		*Low scenario*		*High scenario*	
	Actual	*Propn. of total GSP*	*Actual*	*Propn. of total GSP*	*Actual*	*Propn. of labour force*	*Actual*	*Propn. of labour force*
	$m	*%*	*$m*	*%*	*no.*	*%*	*no.*	*%*
Projects								
Direct	122	0.5	146	0.5	2562	0.6	3074	0.7
Flow-on	149	0.5	255	0.9	2868	0.7	5233	1.3
Total	271	1.0	401	1.5	5430	1.3	8308	2.0
Installations								
Direct	124	0.5	124	0.5	4400	1.0	4400	1.0
Flow-on	224	0.8	315	1.2	4529	1.1	6669	1.6
Total	348	1.3	439	1.6	8929	2.1	11 069	2.6

Source: Burgan et al. 1993, pp. ii, iv.

10.2.3 The economic impact of the ADF in particular regions

The Centre for Applied Economic Research and Analysis (CAERA) at James Cook University was commissioned by the Australian Army to quantify the full economic impact of the ADF on the Townsville region. The CAERA (1993) study was undertaken using input–output analysis.

For the purposes of the study, the ADF in Townsville was separated into the Australian Army, the RAAF at Garbutt, and the Defence Housing Authority (DHA). Four impacts of the ADF on the Townsville region were examined: output, value added, incomes and employment. These impacts are presented in Table 10.5.

In the case of the Army and RAAF, most flow-on impacts occurred in the finance (banking, insurance etc.), the wholesale and retail trade and the community services sectors of the Townsville region. Most flow-on impacts associated with the DHA occurred in the manufacturing, finance, and trade sectors of the Townsville region.

Another measure of the impact of an ADF base on the surrounding region is given by data about RAAF Base Tindal. Information set out in Box 10.1 shows that about 40 per cent of the total expenditure of the base is received by Katherine, the local nearby town, with an additional 50 per cent being received elsewhere in the Northern Territory.

The Commission understands that the Darwin Committee, established by the Commonwealth Treasurer at the time of the 1993-94 Budget, has commissioned a study to establish the economic and social impact of defence activities on the Darwin region.

Table 10.5: **Economic impact of the ADF in the Townsville region**

	Direct impact	*Flow-on impact*	*Total impact*
Army			
Output ($m)	167.2	215.1	382.3
Value added ($m)	136.7	125.5	262.2
Incomes ($m)	136.7	64.4	201.0
Employment (no.)	4 109	2 772	6 881
RAAF			
Output ($m)	40.2	52.1	92.3
Value added ($m)	24.9	30.1	55.0
Incomes ($m)	24.8	15.7	40.5
Employment (no.)	701	643	1 344
Defence Housing Authority			
Output ($m)	19.4	15.7	35.1
Value added ($m)	6.2	8.9	15.1
Incomes ($m)	2.4	4.6	6.9
Employment (no.)	180	184	364

Source: CAERA 1993, pp. 13, 16, 19.

10.2.4 A socio-economic assessment of the Army Presence in the North (APIN) project

In 1993, Kinhill Engineers examined the likely social and economic impacts on the Northern Territory of basing an Army Brigade at Palmerston near Darwin. The impact on the regions from which the Army units were to be drawn was also considered briefly in the study.

Box 10.1: **The regional impact of RAAF Base Tindal, located near Katherine NT**

The following information about RAAF Base Tindal gives an indication of the regional impact of procurement at an operational air base. The main categories of goods and services purchased by the Base include: stores, facilities, utilities, rations, maintenance, telephone and postal services, computing services and fuel. The figures provided are estimates of expenditure by RAAF Tindal, compiled in March 1994, and based on expenditure trends in previous financial years and 1993-94 financial appropriations. The figures do not include salaries paid to RAAF Tindal personnel, or the impacts of personal expenditure in the region by RAAF Tindal personnel.

Type of expenditure	*Katherine*	*Rest of Northern Territory*	*Rest of Australia*	*Total*
	$'000	*$'000*	*$'000*	*$'000*
Stores	150	1 450	1 700	3 300
Facility operations	3 700	1 200	120	5 020
Utilities	3 240	a	na	3 240
Rations	273	1 000	na	1 273
Maintenance	352	69	na	421
Telephone/postage	na	na	500	500
Computing	na	na	100	100
Fuels, oils and lubricants	300	7 500	na	7 800
TOTAL	**8 015**	**11 219**	**2 420**	**21 654**

a Included in the Katherine figure. na Not applicable.
Source: RAAF Base Tindal.

Kinhill estimated the direct and flow-on impacts of the construction and operational phases of the APIN project using input–output analysis. Kinhill noted:

> the results should be viewed cautiously as some doubts have been expressed verbally by the Northern Territory Treasury regarding the reliability of input output data for the Northern Territory economy ... Nevertheless, even allowing for any error in the input output multipliers estimated by Kinhill, the impacts of APIN are likely to be substantial and positive. (Kinhill 1993, p. 28)

The estimated impacts of the construction phase of the project are shown in Table 10.6. These estimates relate to the total impact on the Northern Territory of the construction phase over a ten-year period, and are expressed in 1992 values.

Estimates of the annual impact of the project on the Northern Territory when all personnel have been moved to Darwin (the operational phase) are shown in Table 10.7.

These annual impacts would have offsetting impacts in the regions from which the units being moved to Darwin under the APIN project are being drawn (Holsworthy/Liverpool in NSW and Puckapunyal/ Seymour in Victoria).

Table 10.6: **Economic impact of construction phase of APIN project over a ten–year period, in 1992 prices**

	Direct impact	*Flow-on impact*	*Total impact*
Output ($m)	660.3	340.1	1000.4
Incomes ($m)	177.8	177.8	355.6
Employment (no.)	4 745	4 745	9 490

Source: Kinhill 1993, p. 28.

The offsetting impacts were not fully estimated. But Kinhill expected the impact in the Liverpool area to be offset by growth in the civilian population in the region (which has averaged around 5 per cent per annum), and by the transfer of Army Reserve units from Ingleburn to Holsworthy. Kinhill also noted that there may be some localised impacts around Holsworthy, but these were 'likely to be masked' by the Wattle Grove residential development (Kinhill 1993, p. 9).

Table 10.7: **Annual economic impact of operational phase of APIN project, in 1992 prices**

	Direct impact	*Flow-on impact*	*Total impact*
Output ($m)	78.0	66.6	144.6
Incomes ($m)	69.5	55.6	125.0
Employment (no.)	2 334	1 867	4 201

Source: Kinhill 1993, p. 29.

Kinhill concluded that the Seymour region was likely to be more economically dependent on the Army's presence at Puckapunyal than the Liverpool area was on Holsworthy, and so be more adversely affected. Based on Seymour's average annual population growth rate over the past decade (around 0.4 per cent per annum), the decrease in population associated with the project was equivalent to 'a decade's population growth' (Kinhill 1993, p. 9).

10.3 The Commission's regional modelling work

The input–output studies canvassed above assume that the additional demands created by defence activity can be freely met, either from resources currently in the region, or from goods and services imported from other regions, from skills

migrating into the region or by capital equipment acquired by new investments. Under this assumption, the flow-on effects can typically equal or exceed the direct benefits of defence-related activity.

In fact, many goods and services are freely traded and new investments can be located in whichever region promises the highest return. Available evidence suggests that people also move between regions to take advantage of new job opportunities, but that internal migration for economic reasons is subject to some rigidities (ABS 1987, Bell 1992, IC 1993b).

The Commission has used Monash-MR, a multi-sector, multi-region model of each state and territory in Australia to illustrate the importance of resource mobility, particularly labour mobility, for the gains to a region from defence related activity (Appendix J). The modelling work illustrates the simple point that the flow-on benefits in terms of job creation and income generation cannot be reaped if labour migration does not increase the labour supply to a region to meet the additional demands. Skills shortages may then create bottlenecks that adversely affect other activities in the region.

The model was first used to assess the impact on the Northern Territory, and the economy as a whole, of the APIN project. When capital and skills were assumed to be perfectly mobile, the projected gains to the NT economy were very similar to those found by Kinhill. When skills were not assumed to be mobile, the gains were considerably smaller.

The model also illustrates the zero-sum nature of a regional relocation such as APIN. Since the gains to the NT economy depend on resources moving into the Territory, there will be corresponding losses elsewhere. The overall impact on the Australian economy as a whole was projected to be negligible.

The Commission has also used Monash-MR to assess the regional and economy-wide impacts had the Collins Class submarine project been located in Newcastle instead of Adelaide. The exercise ignores the potential differences in construction and other direct project costs, considerations that went into the site choice originally. But it does assess whether the indirect spillover benefits would have differed, and therefore assesses the impact of the site location on the longer term development of each region, as well as on the economy as a whole.

It is assumed that, had Newcastle been chosen as the assembly site, only the site-specific components of construction, project administration and submarine assembly would have been undertaken in Newcastle. The electrical, electronic, mechanical and other component goods incorporated into the submarines would have been obtained from the same geographic source as currently. On this basis, an estimated $191 million might have been located in New South Wales instead of South Australia had Newcastle been chosen as the site. The first column of

Table 10.8 shows the estimated impact of the whole project on the two state economies given its current location in Adelaide. The second column shows the impact of the whole project had Newcastle been chosen instead. The third column gives the difference between the two, and thus shows the net impact that the location choice had on each state.

Table 10.8: **Long-run effects of annual submarine project expenditure**

	Assembly located in Adelaide	*Assembly located in Newcastle*	*Difference*
Impact on South Australia			
Real State GDP (1992-93 $m)	107.8	10.7	97.1
Employment (jobs)	2610	310	2300
Impact on New South Wales			
Real State GDP (1992-93 $m)	4.7	96.0	91.3
Employment (jobs)	30	1890	1860

Source: Monash-MR projections.

All estimates were obtained on the important assumption that skills and capital were mobile between states and territories. However, as the Automotive, Food, Metals and Engineering Union stated, 'labour mobility is dependent upon a number of factors, not the least being higher wages and security of employment' (Sub. D97, p. 9). To the extent that skills and capital are not completely mobile, the estimates may overstate the impact of either site choice on each of the state economies. Appendix J discusses the impact of making alternative assumptions on skill mobility. Under full mobility, the results show the net gain to the winning state to be of the order of $90 million a year and 2 000 jobs. While small in relation to the economies of the states as a whole, these gains would be considerable to Adelaide or Newcastle.

The results suggest that the regional benefits would have been slightly smaller in New South Wales than in South Australia. The reason is that new defence facilities still put some strain on other activities, even with mobile capital and labour, and some of the activities projected to be adversely affected are more labour intensive in New South Wales than in South Australia.

Irrespective of site location, Victoria was projected to gain as much as New South Wales or South Australia from the project, despite its relatively small

direct involvement. This reflects the importance of its trade links with the other two states. However, there are projected to be corresponding income and employment losses elsewhere in Australia. The modelling results are that the overall impact on the economy as a whole would be negligible.

10.4 Should defence procurement be used to promote regional development?

The question might be asked whether defence procurement should be used to promote the development of particular regions. This question is allied to the issue discussed in Chapter 4 of whether Defence and the Government should take economy-wide and industry development impacts into account.

The Commission's modelling work shows that, although defence procurement has minimal economy-wide impacts, it can have significant regional effects. As the Victorian Government said:

> The regional impacts of defence purchasing [in Victoria] have been quite significant and will continue to be such. In the case of Bendigo the operations of Australian Defence Industries at the Ordnance and Clothing facilities are such that a closure of the plants would impact very heavily on employment and investment in that region. Similarly the impact of a number of defence projects, particularly the ANZAC Ships and the operations of ADI, on the western suburbs is again quite substantial in terms of the employment and investment in an area with high unemployment. In the outer eastern suburbs of Melbourne the impact of some of the ANZAC Ship work on software system and engineering firms, particularly in the Lilydale area, has been the creation of significant amounts of work which would not have been there had the ships been imported. (Sub. 50, pp. 19-20)

And a report prepared for the South Australian Government on the impact of defence procurement on that State (see Section 10.2.2) found that:

> at a time when the State's traditional agricultural and manufacturing industries are experiencing economic difficulties, the stabilising influence of defence related economic activity is of great value. (Sub. 53, p. 11)

Industry participants acknowledged the positive regional effects of defence procurement, but indicated that their location is usually based on the availability of skilled labour and facilities and the requirements of their customers. Hawker Pacific explained:

> Hawker Pacific is part of a service industry and as such its location is dictated by customer requirements. In general, the ADF does not locate its operations close to industry so maintenance and support activities must follow the customer. (Sub. 18, p. 4)

And Transfield Shipbuilding commented:

> Projects will be managed and located to achieve the optimal competitive position. (Sub. 10, p. 9)

Where defence strategic or commercial considerations conflict with regional development considerations, using defence procurement to foster regional development is likely to reduce value for money. As ADI said:

> Encouragement of decentralisation is a separate political and social agenda which may not fit Defence's value for money criteria when selecting tenderers. Indeed, a premium may need to be paid to effect decentralisation, but this would be part of a higher government rather than simply a Defence Department decision process. (Sub. 33, p. 15)

Similarly, Defence expressed reservations about using its purchasing to foster regional development. In a 1993 submission to the Bevis inquiry, Defence said:

> From a purely purchasing perspective, Defence is cautious about using purchasing leverage for regional development. This may mean a premium on normal purchasing costs which could be inconsistent with value for money, open and effective competition and fairness to all tenderers. (Defence 1994d, p. 13)

As discussed in Chapter 4, the Commission considers that Defence should only be required to make procurement decisions in a defence framework, taking into account strategic needs while seeking value for money.

Further, while governments sometimes offer special incentives to attract defence activities, that can be wasteful from a national perspective. For example, they may result in the duplication in a new location of existing, underutilised infrastructure — and pressure to find ongoing work when the initial defence project finishes. This happens in some other countries (see Appendix B). In Canada, for instance, regional advocacy agencies play an important role in developing RFPs — which may make prescriptions such as 'x per cent to be produced west of Ontario' — and evaluating tenders. To be awarded a major contract, the tender considered to be 'best value for money' from a defence perspective must also have a satisfactory regional/industrial benefits package.

The Commission considers there is no justification for using defence procurement specifically to pursue regional development goals. However, an appreciation of the regional effects of defence procurement is important to sound decision making, and the Government should continue to take them into account when making decisions about major defence procurement proposals.

APPENDIX A: INQUIRY PROCEDURES

The terms of reference were received on 2 September 1993. The Commission advertised the commencement of the inquiry in the press, and dispatched an initial circular to those considered to have an interest in the inquiry.

In late September, an issues paper and an inquiry procedures booklet were sent to a range of individuals and organisations. Submissions were invited.

Throughout the inquiry, the Commission has held informal discussions with companies, organisations, government departments and agencies, and military personnel, to seek background information and views about inquiry issues. Names of organisations visited by the Commission are listed in Attachment A1.

In September/October 1993, the Commission visited New Zealand to consult with relevant organisations. Further visits were made to the United Kingdom, Canada and United States of America in April 1994. Names of the overseas organisations visited are listed in Attachment A2.

The first round of public hearings was held in Sydney, Melbourne, Adelaide and Canberra during October 1993. Participants who attended were provided with the opportunity to elaborate on their submissions, and discuss inquiry issues. A total of 59 submissions were received prior to the draft report.

Following the release of the draft report on 24 June 1994, a second round hearing was held in Canberra on 29 July 1994. Between the draft report and the final report, 49 submissions were received. Inquiry participants are listed in Attachment A3.

A consultancy was let to Professor Paul Dibb, Dr Mike Gilligan and Dr Stewart Woodman of the Australian National University's Strategic and Defence Studies Centre. Their report entitled 'The Strategic Focus of the Commercial Support Program' is reproduced as Appendix F to this report.

Attachment A1: Individuals, companies and organisations visited in Australia

AeroSpace Technologies of Australia Limited (Victoria)
AeroSpace Technologies of Australia Limited (Queensland)
Airflite Pty Ltd
Austrade
Australasian Technology Pty Ltd
Australian Chamber of Manufactures
Australian Defence Force (includes military bases and units visited)
— Army Base, Laverack Barracks (Townsville, Queensland)
— Headquarters Australian Defence Force
— Headquarters Logistics Command (Army)
— Headquarters Logistics Command (Air Force)
— HMAS Cairns
— RAAF Base Edinburgh (South Australia)
— RAAF Base Pearce (Western Australia)
— RAAF Base Tindal (Katherine, Northern Territory)
— RAAF Base Townsville
— 2 Cavalry Regiment (Darwin, Northern Territory)
— Navy Office – Materiel
Australian Defence Industries Ltd (New South Wales)
Australian Defence Industries Ltd (Electronics Division, Western Australia)
Australian National Industries Limited
Australian National Audit Office
Australian Sonar Systems Pty Ltd
Australian Submarine Corporation Pty Ltd
AWA Defence Industries Pty Ltd
BHP— Information Technology
British Aerospace Australia Limited
BTR Aerospace Australia
CelsiusTech Australia Pty Ltd
Cheeseman, Dr Graeme, Australian Defence Force Academy
Clough Engineering Group
Cox, Mr John
Cypher Research Laboratories Pty Ltd
Defence Export Services Organisation, British High Commission
Defence Industries Council of Western Australia
Defence Industry Committee
Defence Industry Liaison Council (Northern Territory)
Defence Manufacturers Council

Defence Science and Technology Organisation
Department of Administrative Services, Purchasing Australia
Department of Business and Employment (Victoria)
Department of Business, Industry and Regional Development (Queensland)
Department of Commerce and Trade (Western Australia)
Department of Defence (includes names of Divisions/Branches that provided briefing to the Commission or were visited by the Commission)
— Acquisition and Logistics Organisation
  – Capital Equipment Division
  – Facilities and Property Division
  – Industry Involvement and Contracting Division
    - Industry Policy and Programs Branch
    - Exports and International Programs Branch
  –Logistics Division
    - Commercial Support Program
    - Defence Quality Assurance Organisation
— Budget and Management Organisation
  – Resources and Financial Programs Division
  – Inspector-General Division
— Strategy and Intelligence Organisation
  – Force Development and Analysis Division
Department of Finance
Department of Industry and Development (Northern Territory)
Department of Industry, Technology and Regional Development (ACT)
Dibb, Professor Paul, Australian National University
Dunlite Power Generation Pty Ltd
Economic Development Authority of South Australia
Ericsson Defence Systems
Evans Deakin Industries Limited
Gilligan, Dr Mike, Australian National University
Halpern Glick Maunsell Pty Ltd
Hawker de Havilland Ltd (New South Wales)
Hawker de Havilland Ltd (Western Australia)
Helitech Industries Pty Ltd
Jennings, Mr Peter, Australian Defence Force Academy
Lexmark Pty Ltd
Mincom Pty Ltd
Mitec Ltd
MRad Pty Ltd
NAUTRONIX Ltd
New Zealand Ministry of Defence

NQEA Australia Pty Ltd
Perry Engineering
Philips Defence Systems
Siemens Plessey Electronic Systems Pty Ltd
South West Groups
Stanilite Electronics Pty Ltd
Telecom
Transfield Shipbuilding Pty Ltd
Transfield Shipbuilding Pty Ltd (Western Australia)
Vision Systems Ltd /CJ Abell
Western Australian Specialty Alloys Pty Ltd
Wrigley, Mr Alan
Woodman, Dr Stewart, Australian National University

Attachment A2: List of individuals, companies and organisations visited in other countries

Canada

Aerospace Industries Association of Canada
Atlantic Canada Opportunities Agency
Computing Devices Canada
Department of National Defence
Industry, Science and Technology Canada
NATO Industry Advisory Group
Public Works and Government Services Canada
SPAR Aerospace Ltd

New Zealand

Ministry of Commerce
Ministry of Foreign Affairs and Trade
New Zealand Defence Force
New Zealand Manufacturers' Federation Inc.
New Zealand Trade Development Board

United Kingdom

Acquisitions and Logistics Branch, Australian High Commission
Cabinet Office — Efficiency Unit
Defence Manufacturers Association
Ministry of Defence
— Chief of Defence Procurement, Dr Malcolm McIntosh
— Defence Contracting Staff
— Defence Export Services Organisation (DESO)
— Market Testing and Contractorisation Service
Serco Ltd
Society of British Aerospace Companies

United States of America

Acquisitions and Logistics Branch, Australian Embassy
Boeing — Defense & Space Group
Mr David Chu — Rand Corporation
Department of Defense
— Acting Under Secretary of Defense for Acquisition, Mr Noel Longuemare
— Associate Deputy Assistant Secretary, Contracting, Air Force, Mr Ira Kemp
— Director, Defense Procurement, Ms Eleanor Spector
— OSD Program Analysis and Evaluation, Mr Frank Tapparo
Martin Marietta Corporation
Office of Management and Budget
Office of Technology Assessments
US Army Corps of Engineers

Attachment A3: List of participants

Submissions were received from the following individuals and organisations prior to and after the release of the draft report. Submissions received after the draft report are prefixed with the letter D. Participants marked * presented submissions at the first round of public hearings (October 1993), while participants marked # presented submissions at the July 1994 Canberra public hearing.

Participant	Submission number
AeroSpace Technologies of Australia Limited *	19, D95
Allen Allen & Hemsley	D81
Association of Australian Aerospace Industries *	14, D85
Association of Consulting Engineers Australia	D93
Austrade	D88
Australian Anti-Bases Campaign Coalition	12
Australian Chamber of Manufactures	48, D103
Australian Council of Building Design Professions Ltd *	30, D71
Australian Defence Industries Ltd	33, D60
Australian Electrical and Electronic Manufacturers' Association Ltd * #	22, 49, D75, D96
Australian Information Industry Association Limited	42
Australian Institute of Quantity Surveyors	D92
Australian Optoelectronics Industry Network	D72
Australian Peace Committee (SA. Branch) Inc *	3, D70
Australian Small Business Association	43
Australian Submarine Corporation Pty Limited *	24
Automotive, Food, Metals and Engineering Union	D97
Avtronics Pty Limited *	5
AWA Defence Industries Pty Ltd	16
Bisalloy Steels Pty Ltd	28
British Aerospace Australia * #	23, D76
BTR Aerospace Australia *	15
Camtech *	31, D66
Carey, Mr A V, Procurement Executive, Ministry of Defence, UK	D73
Carey, Ms Joan	17
Computing Devices Canada Ltd	D108
Construction Industry Engineering Services Group Limited *	9
Defence Export Services Organisation, Ministry of Defence, UK	D67
Participant	**Submission number**

Defence Industries Council of Western Australia	45
Defence Industry Committee (Business Members)	58
Department of Administrative Services	D94
Department of Commerce and Trade (Western Australia)	47, D80
Department of Defence * #29, 52, 54, 56, 57, 59, D74, D100, D102, D106, D107	
Department of National Defence, Canada	D82
Disney-Howe Associates Pty Ltd #	D62, D87, D91
Dunlite Power Generation Pty Ltd	38
Gambro Pty Ltd	6
Goodwood Travel	34, D77
Halpern Glick Maunsell Pty Ltd	46
Hawker De Havilland Limited	40, D98
Hawker Pacific Pty Ltd	18
Industrial Supplies Office Ltd and The Australian Small Business and Defence Council *	7, 44
International Industry Consultants Pty Ltd	D78
Joson, Dr Surinder	41
Just Free Clearances Pty Ltd	37
Liesch, Dr Peter	39
Longuemare, Mr R N, Principal Deputy Under Secretary of Defense USA	D101
McGinn, Mr Sean	D104
Morris Productions Pty Limited *	20, 55
MTIA Defence Manufacturers' Council	36, D89
New South Wales Government	D105
Normalair-Garrett Australia *	13
North Shore Consultech Pty Ltd *	2
Owen Davies Associates Pty Ltd	D63
Peace Action Collective	32
Rockwell Systems Australia Pty Ltd	25
Rourke, Rear-Admiral (Ret'd) W J #	D64, D86
Scientists for Global Responsibility	8
SGS Australia Pty Ltd *	27
Serco Australia Pty Ltd #	D68, D90
Siemens Plessey Electronic Systems Pty Ltd *	1
South Australian Government	53
Spar Applied Systems	D99
Standards Australia *	4
Starkstrom Marine *	21
Participant	**Submission number**

APPENDIX B: DEFENCE PROCUREMENT IN THE UNITED KINGDOM, CANADA AND THE UNITED STATES

The Commission held discussions about defence procurement with government and industry representatives in the United Kingdom (UK), Canada and the United States of America (USA). They covered a wide range of issues pertinent to defence procurement in Australia. How procurement is undertaken partly reflects the historical and political conditions in the country concerned. The first part of the appendix gives a brief overview of these factors for each of the three countries. The next part of the appendix examines approaches to various issues arising from defence procurement, based on the countries studied. The final part considers contracting-out. Where sensible, Australian terms, such as RFT, have been used in place of their respective overseas counterparts.

B1 Historical and political background

All three countries have democratically elected governments, albeit with differing structures. All three are members of the North Atlantic Treaty Organisation (NATO) and with the end of the Cold War considerable reassessment of their defence roles — and budgets — is underway. The immense size of defence budgets and their flexibility (arising from the ability to defer capital expenditure) have made defence spending a target for budget cuts and, at least in Canada and the USA, for use in pursuit of non-defence policy objectives.

The UK has a strong central government with an executive which, as in Australia, is responsible to Parliament. The UK is involved in considerable initial development of defence equipment, although this may be in the context of collaborative agreements with other European countries.

Canada also has an executive responsible to Parliament. Canada is a federation, but one where regional issues and ‘nation building’ are ever present considerations and consensus seeking often characterises the political scene. Reliance on maritime trade has been an important motivation for Canadian interest in the defence of western Europe. Canada has long played a leading role in UN peacekeeping operations.

A key distinguishing factor in the US political system is the strong separation between the executive and Congress. The executive is led by the President, who

is directly elected and chooses the ministry from outside Congress. Congress exerts its influence over the executive and bureaucracy by passing legislation which is far more specific than would generally be the case where the executive is formed out of the parliament. Matters which would be dealt with in Australia by regulation under enabling acts — or by mere executive decision — are often codified in statutes in the USA. Reform of the defence acquisition system, now underway in Congress, is an extremely complex exercise.

B2 Defence procurement issues

B2.1 Defence and non-defence objectives

The UK defence budget is targeted solely at defence objectives, whereas in Canada and the USA defence spending is used to pursue broader government objectives. In all three cases, tenders are evaluated initially on the basis of value for money for defence; non-defence considerations enter essentially as requirements with which the winning tenderer must comply.

In Canada, industry and regional development objectives overlay all government procurement. Tenderers for major projects are required to incorporate industrial/regional development proposals into their bids. The preferred tenderer's industrial/regional proposals are then assessed for acceptability. RFTs may prescribe where a facility should be built (eg. west of Ontario).

In the USA, non-defence objectives tend to be pursued through legislated terms of the contract with which the winning tenderer will need to agree. There are 'set-aside' programs under which a certain portion of work must be undertaken by small business, minority groups and labour surplus areas. The US system seems to value fairness and accountability above efficiency.

B2.2 Independence of the defence department

The UK Ministry of Defence (MOD) operates under a global budget but spending proposals are reviewed by Treasury. The Chief of Defence Procurement is responsible for reporting to Parliament on probity and, where a political direction is given to overturn a value-for-money based decision, is able to record an objection in writing.

The Canadian Department of National Defence (DND) does not do its own procurement, which is handled by Public Works and Government Services Canada (PWGSC). A number of other departments are involved in project development and approval. Regional advocacy agencies must reach a consensus on those clauses of the RFT relating to industrial benefits to regions. The

Interdepartmental Procurement Committee, chaired by DND and including the regional agencies and Industry Canada, assesses the acceptability of the industrial/regional benefits package of the recommended tenderer.

US defence procurements are undertaken by the individual Armed Service rather than the Department of Defense. Final say, however, rests with the Secretary of Defense or ultimately the President. Congress must approve major projects and — separately — appropriate funds. Project funding is on an annual basis, with Congress effectively voting on programs several times each year. Procurement officials can be called to testify before Congressional committees.

B2.3 The procurement process

The UK procurement process is under review in the MOD, with a view to its streamlining.

In the USA, Congress is considering a package of reforms to amend the very complex defence acquisition process. The focus in the various House and Senate Committees is on increasing the threshold for simplified procedures for low value purchases and broadening the definition of commercially available products (so as to reduce cost reporting requirements). But the broader socioeconomic policy requirements (including set-asides for particular groups) are expected to remain.

Prequalification

The UK has abandoned formal prequalification (which had included such things as proof of financial standing, and management and quality plans), partly in response to the cost of maintaining the information base. However, at some point prior to the signing of a contract the successful tenderer will need to have convinced MOD of its ability to meet contract requirements. The point at which a firm is required to demonstrate its qualification to handle the project is essentially a matter of judgment for the MOD project team.

In Canada, PWGSC retains lists of prequalified suppliers to avoid the need for repeat site visits. Quality assurance to ISO 9000 standards is generally required, although certification is not.

In the USA, any approach which may exclude firms from responding to the RFT, including prequalification, will generally not be acceptable to Congress. However, firms need to demonstrate an ability to meet contract requirements by the time of the award.

Shortlisting

In the UK, formerly all firms which were prequalified could tender. The present approach is to reduce the number of interested firms to at most six, which will be invited to tender, and to shortlist faster.

Canada does not have such a shortlisting approach. Proposed procurements above $C25 000 go on an electronic bulletin board — the Open Bidding Service. The Service replaced a system which rotated firms through restricted source lists.

For US procurements, all firms are generally free to respond to the RFT.

Debriefing

Defence departments in all three countries are required, and find it in their own interest, to debrief unsuccessful tenderers. Debriefing is seen to improve the quality of future bids, and hence the value for money received from defence procurement. However, fairness is also seen as important, either as an end in itself or, more pragmatically, as a means to reduce costly and time consuming protests and responses to inquiries by politicians.

The USA has a formal protest system, in addition to the option of lobbying through Congress. Protests on source selection place the burden on the Administration to show that the decision was objective, fair and rational. Because subjective judgements are difficult to justify, a formal protest system tends to favour 'lowest price conforming tender' source selection over a 'value for money' approach. This in turn encourages very detailed specifications in an attempt to articulate what would otherwise be left to judgment.

B2.4 Exports

In the UK, the MOD supports defence exports because of their strategic benefits. Exportability is also viewed as a potential source of economies of scale, reducing future costs to MOD (eg. where large acquisitions may be purchased in several tranches). Consequently, changes or small compromises to specifications may be accommodated to enhance exportability. Tenderers are invited to suggest such changes. Export prospects may be a deciding factor between otherwise equal tenders. The Defence Export Services Organisation (DESO) advises MOD on the reasonableness of industry claims on exportability, itself suggests ways to enhance exportability, and acts as an export marketing arm of MOD.

Canada has a broad perception of the benefits of exports. The Department of Foreign Affairs and International Trade seeks to promote Canadian goods

abroad. A Defence Industry Productivity Program uses government investment in capital and R&D to position Canadian industry to sell to the USA. Canada has had a formal role in the US defence industrial base since World War II.

The US Armed Services procure significant amounts of leading edge technology products which, for reasons of security and cost, would not be readily exportable. However, the quantities procured by the US forces themselves often make it viable to produce lower cost/capability export derivatives. Exportability is rarely a consideration in evaluating tenders for supply to the US forces.

Australia is a major purchaser through the Foreign Military Sales (FMS) system, whereby procurements are made by the relevant US Armed Service on behalf of an overseas buyer. The US Government charges a commission on FMS sales.

B2.5 Intellectual property

In all three countries governments do not generally require ownership of intellectual property created during a contract. Rather, governments are mainly concerned to have access to the intellectual property so that it can be used in other contracts. However, if government access is extended to the 'background' intellectual property the contractor brings to the contract, this can raise concerns for the contractor that it will be educating potential competitors. The costs to the owner of monitoring and enforcing abuses of that background information by other firms to which it is supplied can be a deterrent to contracting with the government.

Ownership of intellectual property generated within a contract tends to become an issue where the government has made a significant contribution through research establishments or where it is considered necessary for access or security. Under Canada's checklist, government ownership is also considered where the contractor is unlikely to commercialise the technology in a timely manner or where government ownership is needed to avoid fragmented ownership and facilitate system integration. In general, governments have not benefited greatly from commercialising their intellectual property.

Contracting-out often entails negotiating the release of the intellectual property of equipment suppliers (eg. maintenance handbooks) to the service contractor. This will be less of a problem where the service contractor is not a manufacturer in competition with the equipment supplier. However, where contracts are let for large packages of work, intellectual property deals may be needed with a number of equipment suppliers.

B3 Contracting-out

B3.1 Extent of contracting-out

Of the three countries, the UK has had the most intensive contracting-out program. The USA, however, has long used contractors for many on-base activities, reflecting the extent of infrastructure on many large US bases. Job protection arrangements in Canada have mostly confined contracting-out to new facilities, although Canada is relying on industry to support more of its requirements.

The range of activities contracted out to the private sector is quite diverse. Some examples given to the Commission are listed below. They should not be taken as comprehensive, and some of the activities may be contracted out by countries other than those for which the example is given.

The UK:

- warehousing and distribution
- technical training for electrical and mechanical engineers (at REME Arborfield)
- repair of communication equipment and other support activities on military bases in Germany
- simulated air attacks on naval ships and ground troops
- helicopter and air traffic control training (at RAF Salisbury)
- air traffic control and air base fire services (on Gibraltar)
- aircraft maintenance
- ballistic missile early warning system maintenance and operation (at RAF Fylingdales)
- logistic support of deployed forces (eg. during the Falklands War) and replenishment at sea in peacetime and war

Canada:

- depot level and increasing amounts of base support for the Air Force
- the ballistic missile radar early warning system
- initial pilot training
- naval reserve and coastal defence vessel maintenance
- cleaning services, grounds maintenance, painting, and security duties
- catering
- engineering test establishments

- computer maintenance
- major and minor construction

The USA:

- catering
- laundry
- automotive maintenance
- janitorial services
- base maintenance
- control towers
- weather advising
- fire protection
- guard services
- launch services for strategic missiles
- medical services
- training bases
- flight line maintenance
- logistic support for deployed forces (LOGCAP)
- maintenance of specialised equipment (avionics, electro-optics, electronic warfare)

B3.2 Identifying the core

Some would consider that certain activities listed above constitute 'core' military functions which should not be contracted out (nor done by civilian government employees). Historically, the trend has been for navies to make use of civilian labour for on-shore activities, for air forces to eschew civilian support for aircraft which are deployable forward, and for armies to fall in between on the basis that deep support should not be deployed into battle areas. Economic and technological pressures are the driving factors in a fresh assessment by defence departments of what tasks must be performed by uniformed personnel.

UK officials are tending to ask why Defence needs to undertake a particular activity, rather than seeking to identify which activities are core. This approach has been found more fruitful in expanding perceptions of which activities can be market tested. Given that perceptions of what must be done by military people have changed, it is seen as unnecessarily inflexible to attempt to define the core

and risk that such definitions will become fixed. Further, managers tend to adopt a defensive posture, looking for excuses why their activity could not be market tested. For example, whilst a decision to scramble fighter interceptors may be clearly a military one, the radar intelligence required for that decision need not necessarily be generated by uniformed personnel.

In the UK, industry has been encouraged to participate actively in the process by making innovative (perhaps technically non-compliant) responses to RFTs; and to identify activities which could be contracted out, as well as underutilised capacity which could be put to commercial use.

The pressures from budget cuts tend to soften perceptions of where civilians could not be used and even undermine the 'core' paradigm. In many situations the relative effectiveness of civilians and uniformed personnel becomes another component of the trade-offs involved in maximising the military capability produced from a given defence budget.

In addition to budgetary pressures, technological forces are working against the approach of defining core areas in which only uniformed personnel may be used (eg. on operational bases, or in areas of potential conflict). Posting cycles and re-enlistment rates may make it difficult to build up an adequate base of uniformed skilled staff to maintain advanced and highly technical equipment. The USA in particular is dependent on civilian contractors for the support of a range of high technology equipment, such as avionics, electro-optics and electronic warfare systems.

B3.3 Civilians and military operations

A key consideration in determining the limits of contracting-out is perceptions of whether civilians can be relied on, particularly when hostilities start. A related question is the appropriateness of exposing civilians to danger.

Civilians are being relied on in some fairly critical areas such as nuclear attack early warning systems (see above). Moreover, they have been used in support roles in recent wars. For example, in the case of the UK:

- civilian contractors were used in the Gulf War to operate target drones to exercise Rapier surface-to-air missile systems;
- British civilians were present at Saudi air bases on contracts prior to the Iraqi invasion of Kuwait and continued to work there during hostilities; and
- ships on the civil register were contracted to carry out resupply operations in the Falklands War.

By way of further examples, some 1500 civilians are employed by a UK company at the Diego Garcia operational base for the US Rapid Deployment Force, while airfield support is already contracted out at the Gibraltar forward operational base.

For the USA, as a rule contractors do flight line maintenance on US home bases only and front line fighter aircraft are serviced only by military personnel. The use of contractors is constrained by the general policy that they do not deploy with their units — but there are notable exceptions to this. In the Vietnam War it was common for civilians to arrive some time after a unit had initially deployed. In the Gulf War, civilian specialists were deployed to maintain equipment. Civilian specialists are used on aircraft carriers and would generally stay aboard as the vessel approaches a war zone. The historical use of contractors on large US bases has removed some of the suspicion over the quality of service which may be present when an activity is first contracted out. Industrial action such as strikes and picketing have all been part of this experience.

Many drew the Commission's attention to the preponderance of ex-military personnel working for contractors, and the military ethos they tended to share. It was also pointed out that the responsibility for personnel rested with the contractor rather than the military and that the risk could be mitigated by the contractor through, for example, providing protection (eg. armed guards, chemical warfare suits), paying danger money, recruiting appropriate personnel and developing contingency plans for reinforcement. Where necessary, the existence of such risk controls would form a routine component of tender evaluation. However, some firms' corporate philosophy may prevent them from entering into contracts which would leave even volunteer employees exposed to significant danger.

The UK is considering a 'sponsored reserves' program by which contractor staff could, in certain circumstances, be activated as uniformed personnel under military command — something which has also been researched within Australia's Department of Defence. This approach was viewed as a way of addressing concerns that contractors could not or would not continue to serve in the event of hostilities.

B3.4 In-house bids

In-house bids are generally allowed in the UK; exceptions to this include where the activity is viewed as inappropriate for government, where the in-house team is not considered as having a good chance for success, and where a quick resolution is considered important. One cost of allowing an in-house bid is that it slows down the process considerably.

Where successful, in-house bids have generally produced savings in the target range of 20–25 per cent. Much of the improvement in in-house performance derives from the focus on outputs that comes from the tendering process. Further, activities such as accounting, which may formerly have been viewed as non-productive overheads, become profit centres in their own right, improving morale and productivity.

Successful in-house teams are sometimes civilianised in the UK. In part, this is to improve their competitiveness by reducing their operating costs. However, there is also a view that, if an activity is subjected to market testing, a judgment has already been made that it does not require military personnel.

In-house bids often require financial restructuring to clarify what the true costs of the activity are. Previously, funds could have been drawn from a number of budgets. Insurance costs are imputed to the in-house bid. Treasury approval is needed for MOD to lend any funds to the in-house operation.

In Canada, the in-house operation is generally 'put right' prior to market testing. However, difficulties in disposing of surplus labour have greatly reduced the opportunities for market testing.

In the USA, an important constraint on contracting out is a legislated requirement that 60 per cent of work on bases be done by government employees — who may be civilian or military. Very little depot level work is done by uniformed personnel. Contracting out of maintenance is being used as a means of supporting the defence industrial base in the face of cutbacks to production work.

In-house bids are rarely allowed for work which is put to tender in the USA.

B3.5 Other contracting-out issues

Use of former Service personnel

To date, UK contractors have relied much on former Service personnel to provide a ready source of trained workers for activities contracted out under the market testing program. The economics of contracting-out may change as contractors find they need to do more of their own training in the future.

Size of contracts

In the UK, market tests are now required to be in packages of at least £5 million (about $A10 million). Smaller packages tended to allow insufficient scope to rationalise activities and to have specifications which reflected the status quo (eg. by being based on inputs). Private contractors have shown little interest in small contracts.

APPENDIX C: INDUSTRY PRIORITIES: EXTRACT FROM STRATEGIC REVIEW 1993[1]

1. The optimisation of Australian industry involvement in defence activities and procurement assists with broadening the total support base for national defence. As a result of the achievements in defence procurement during the 1980s, there are further opportunities to maintain and develop the national capacity to defend Australia.

OPTIMISING INDUSTRY INVOLVEMENT

2. Industry plays a central role in our national capacity for defence. Defence is looking towards industry to provide maintenance and support of equipment, and through the Commercial Support Program to provide a range of other support services — such as catering and base support.

3. Through achieving greater efficiency, Defence is able to move more of its resources towards the combat end and away from support activities. This process needs to continue, with the aim of achieving an ADF structure that as far as practicable contains only those capabilities unique to defence forces: combat and combat-related capabilities.

4. Drawing on local industry serves several objectives. Defence can avoid needless duplication by using commercial suppliers, which are often likely to provide goods and services more efficiently than Defence; industries familiar with supplying to Defence provide a better industrial base for surging to meet higher usage rates during conflict; and engaging local industry supports the broader objective of encouraging greater community awareness and commitment to defence issues. Yet supporting Australian industry is not a strategic objective in its own right. The Defence Organisation must identify its strategic needs to define the appropriate level of reliance on local industry.

5. By moving a range of functions to industry, Defence has assisted micro-economic reform. New industries have been established on commercially-competitive grounds. This has been achieved by insisting on cost-effectiveness, and by demanding high standards of production. The result is industries better able to compete in the international marketplace.

[1] The following is a reproduction of Annex B of *Strategic Review 1993*, pp. 69–75.

6. Over the last decade, Defence has divested itself of a direct role in the production of capital equipment and consumables, with the privatisation of Williamstown Dockyard and the establishment of Aerospace Technologies of Australia Ltd (ASTA) and Australian Defence Industries Ltd (ADI) in place of the former Office Of Defence Production.

7. Defence self-reliance is advanced by greater use of local rather than overseas industry. Local industry can be less susceptible to interruption of supply by interdiction or decisions of foreign governments, and is more likely to treat an urgent Australian military need as a high priority. Yet self-reliance does not mean complete self-sufficiency in the supply of goods and services. Australian industry, with the disadvantages of a small indigenous defence market and remoteness from the biggest markets, will often not be competitive. Complete self-sufficiency would divert resources at the expense of capability.

8. Defence, therefore, has to manage two different interests: our desire to achieve the most efficient supply of goods and services and our interest in a more self-reliant defence. At times our strategic interests will call for a more interventionist role in the market-place, through the paying of premiums and the establishment of closer relationships with particular local suppliers. Such judgments require a clear view of our strategic priorities for industry.

9. Under the terms of the ANZAC Ship Treaty, there is a special relationship spelt out between Australia and New Zealand. The Treaty states that ‘For the purpose of Defence procurement, the industries of both Participants shall be treated as a common industrial base and each Participant shall treat the industry of the other in the same way as it treats its own with the exception of a small number of high security or third country collaborative projects’. Any reference to Australian industry should be taken as referring to Australian or New Zealand industry.

INDUSTRY ASSISTANCE TO THE ADF

10. There are two main ways in which industry assists the various ADF capabilities. Firstly, industry supports the existing capabilities of the ADF. Secondly, industry enables Defence to acquire new systems to develop its capabilities.

11. Industry ‘supports’ defence capabilities through repair, maintenance, overhaul and adaptation of equipment and supply of consumables. Repair, maintenance and adaptation is the most critical form of industry assistance. Defence already relies heavily on local industry for these services.

12. ‘Support’ also extends to the supply of consumables. These range from ordnance to water, food and fuel. Many of these are routine items that Australian industry will supply under normal commercial arrangements. Local support through supply of consumables is therefore of strategic value to us, although at lower priority than repair, maintenance and adaptation.

13. In the case of ordnance, Australia is generally not a competitive producer. Moreover, ordnance can often be provided from overseas with short lead-times, or can be stockpiled. The possibility exists, however, of disruption of overseas supply through decisions of other governments or through interdiction of supplies. There is also a risk that overseas suppliers will have other priorities when urgent supplies are needed by Australia. Furthermore, stockpiling involves uncertain judgments about rates of consumption during potential conflict.

14. Industry also assists Defence in acquiring new capabilities. For all major new capabilities Defence will look to maximise local industry involvement, usually via the use of local prime contractors teaming, as necessary, with overseas suppliers of equipment and technology in order to secure best value for money. We would expect the trend to greater local industry involvement to continue, as past Defence acquisitions impact on local industry capability and general microeconomic reforms raise further the overall competitiveness of local industry. In aggregate terms, however, the overall level of Australian content in capital procurement is unlikely to exceed, and indeed may fall below, the estimated current level of 65%, as smaller and diverse projects figure more prominently in the capital program.

15. We need to recognise, however, that local manufacturers need not play this role exclusively: local manufacturers will not always be competitive, and there are many overseas suppliers to which Australia has exceptional access. We should exploit these strengths on a case-by-case basis, having prime regard for the strategic interest of the ADF. As with most other countries, it will be most cost-effective for us to draw on overseas sources of supply for some new capabilities without detriment to our ability to operate them. This is likely to be most true for major aerospace platforms, where the size of the Australian and prospective export markets and the capital requirements for development and production provide an insurmountable barrier to a commercially-sustainable domestic capability. We will, therefore, seek to optimise the role for local industry in the acquisitions area on the basis of strategic, technological and value for money criteria.

16. These are case-by-case judgments. Circumstances most likely to favour a sole or major role for local industry are:

- where Australia is commercially competitive (particularly in niche areas, such as weapons systems integration);

- where we have unique needs in important capability areas that overseas suppliers are not able to meet, which reflect the peculiarities of our natural and strategic environment;
- in the areas of intelligence, surveillance, sensor equipment (including electronic warfare) and associated command and control;
- where overseas suppliers are able to supply, but where they are not sufficiently reliable, or they are unwilling to supply due to political or national disclosure constraints; or
- where local production is needed to establish a capacity to support a new capability.

17. While we are prepared to consider some premiums and other departures from commercial practice where there are strong strategic reasons for doing so, Australia's general strategy will be to avoid them as far as possible. Defence has had much success in recent years in making local industry a more efficient and competitive source of assistance. It will remain important, however, to have regard to the long-term commercial sustainability of the capacity once created.

18. In most of these fields, the use of Australian industry is likely to be notably more cost effective than retaining the full capability within the ADF, and is also likely to be more cost effective than the use of overseas industry. In certain fields, such as communications, intelligence and surveillance, even if Australian industry were not internationally competitive (and there is strong evidence that it is), Defence investment in Australian industry is necessary to ensure that the best technology imported from elsewhere is adapted and sustained to retain an edge.

KEY CAPABILITIES FOR INDUSTRY SUPPORT

19. More specific capability priorities for industry will continue to evolve as Defence more precisely defines operational requirements and the capabilities to meet these requirements. In terms of key ADF priorities, the following indicates in broad terms the capabilities Defence is looking for from industry:

- Command, Control, Communications — Defence requires the best technology available in the world, adapted to the Australian environment, fully integrated and secure, to ensure an edge over any potential adversary. Given technological advances in the commercial field, Defence is looking to increase its support from industry in the software development and systems integration areas, recognising that some technology transfer from overseas may be involved. Security, integration and adaptation require considerable indigenous industry support and Defence will aim to

maximise the use of technology that has dual defence and civilian applications.

- Intelligence — Defence requires systems that provide a high level of operational availability on a continuous basis and timely distribution to users. As for C^3, software support and systems integration are important.
- Surveillance — Defence requires leading-edge technology adapted to meet Australia's unique geophysical environment. It also needs advanced facilities for the integration and analysis of information from various sources. Maintenance and through life support of these systems by Australian industry is a high priority.
- Weapons Platforms — The maintenance, repair and through life support of weapons platforms is a high priority for industry assistance to Defence. Adaptation to meet Australia's environment is also a high priority. The production or manufacture of platforms in Australia will be a priority when it represents value for money or where it contributes to the development of capabilities and skills required for through life support.
- Combat Systems — The maintenance, repair and through life support of combat systems are of the same high priority as they are for weapons platforms. Especially important is the capability to integrate weapons systems with associated command, control and communication systems, and the skills required to adapt the systems to Australia's environment.
- Munitions — Defence will be looking for a combination of supply by Australian industry, for high-usage items and for those items where the possibility exists for disruption of overseas supply, and of stockpiling.
- Logistic Support, including transport and supply of consumables — Defence will make maximum use of facilities and services already available in the community. In particular, Defence will be looking for increased industry support in the north of Australia.

20. The above suggests that the following industry sectors will be of particular importance to Defence:

- electronics/optics: to support intelligence systems, systems integration activities, weapons systems and surveillance;
- communications and information technology: to support command, control and intelligence systems and critical management and administration systems, and to integrate these systems with specific weapons systems;
- aerospace: to support/maintain and provide infrastructure for operation of aircraft and their systems, and to adapt aircraft systems;
- shipbuilding and repair: to support/maintain ships and their systems, and to adapt those systems;

- munitions: to produce stocks of high-usage munitions and to maintain sophisticated munitions such as missiles; and
- land vehicles: to adapt, repair and maintain vehicles suited to Australia's terrain and environment.

21. In addition, Defence is increasingly looking to Australian industry, on a competitive basis, to provide support services, consumable items and minor capital items across a wide range of areas.

SUPPORTING REGIONAL AND GLOBAL SECURITY

22. Changes in Australia's international outlook have created new opportunities to use local industry capabilities for the combat effectiveness of the ADF in support of other important objectives, including regional and global security and strong alliances.

23. Australia's defence relationships with South-East Asia can assist in opening up a range of areas for cooperation in defence industry. They can facilitate the development of logistics cooperation, technology development and sharing and collaborative projects that build on Australia's significant industrial infrastructure and performance. In undertaking substantive cooperative and collaborative programs with South-East Asian nations, there is the prospect of commercial advantage and greater engagement of Australian industry with the region, in addition to the strategic benefit of strengthening regional defence.

24. The exposure of Australia's skills in project management and systems integration and wider industrial capabilities to South-East Asian nations may facilitate the promotion of Australia as a support base for a range of their military equipment and systems.

25. The development of an efficient Australian defence industry has created valuable new opportunities for exports of defence goods and services to the Asia-Pacific region, and for collaborative developments with these countries. Exports to South-East Asia and the South-West Pacific, in particular, can serve our objective of regional security, by strengthening our neighbours' security.

26. At the same time, defence exports support our national capacity for defence. They are a valuable way of making local industry more efficient and of retaining industry capabilities of value to Defence.

27. The approach to exports and collaborative developments in our region will need to reflect a balance of our strategic interests. In practice, there will be few cases where we should be constrained on strategic grounds, given the competitive nature of the international defence market.

28. There will be a need to take into account different industrial practices and processes when contemplating collaborative development, especially where collaboration involves a reciprocal obligation on Australia to purchase goods and services from the other country. These matters will need to be reviewed case-by-case.

29. Within these and other constraints of government policy, the approach should be to encourage increased market opportunities abroad. The acceptability of Australia as a commercial player will depend on our reliability as a supplier. It is important that defence export guidelines and practices clearly support this approach.

BALANCING OBJECTIVES

30. With the uncertainties in our long-term strategic outlook, the demand for using broader defence capabilities for purposes other than the direct defence of Australia can be expected to grow.

31. In general, we should seek to use broader defence capabilities to a greater extent in support of regional engagement, alliances and global security — collectively, these objectives are now more important in our overall security. But in a period of resource constraint, we must ensure that greater efforts in these areas do not conflict with important needs arising from our national capacity to defend ourselves. The shape of our efforts should be directed, where practical, towards those areas where the demands of our different objectives are mutually supporting.

APPENDIX D: AUSTRALIAN INDUSTRY INVOLVEMENT — SUGGESTED GUIDELINES

[Note: The Commission suggests the following guidelines to reflect the findings and recommendations set out in Chapters 4 and 5 of the report.

In preparing the guidelines, the Commission has drawn on the Australian Industry Involvement Framework Interim Advice published by Defence in June 1994. However, it has removed reference to Tier One, Tier Two, Local Content and Defence Offsets, as well as reference to minimum, target and expected levels of local content. The suggested guidelines have only two components. The first component (Priority One) would specify the capabilities in Australian industry that Defence considers essential to a project and its through-life support. The second component (Priority Two) would indicate the capabilities in Australian industry that Defence considers desirable in, but not essential to, a project and its through-life support.

Material in bold font reflects new or substantially amended wording. Material in normal font is taken from the Interim Advice.]

Introduction

1. Defence policy for industry is directed towards enhancing Australian industry's contribution to defence self-reliance. Australian Industry Involvement (AII) is the term used to describe the program of activities, undertaken by Australian industry, aimed at improving the self-reliance of the Australian Defence Force (ADF). Most of these programs are established and maintained through contracts to supply goods and services to the ADF.

2. The 'Defence Policy and Industry' report of November 1992 clarified further Defence priorities for Australian industry and identified some changes to Australian Industry Involvement in Defence acquisitions. The Strategic Review 1993 provided further guidance on defence priorities for industry.

3. AII will now be focused on two complementary objectives: the development of specific industry capabilities that are considered to be

important for the through-life support of particular strategic assets and the broadening of the support base for national defence. This broadening will be aligned with key capabilities for industry support identified in the Strategic Review 1993 **(see attachment)**.

Policy framework

4. While local industry development and support are not part of the Defence mission per se, Defence self-reliance is enhanced by greater use of local, rather than overseas industry to provide goods and services that have high strategic priority. Self-reliance does not mean self sufficiency. Inevitably the ADF will continue to depend, to a significant degree, on overseas sources of supply as it is not practicable for Australian industry to offer the full range of manufacturing, technological and supply and support capabilities required. Defence recognises that the development of important industry capabilities that can be sustained through spin-offs into export activities will benefit industry and the ADF. The development of defence export capabilities by Australian industry is the subject of separate policy initiatives.

5. Defence needs to manage two interests: the desire to achieve the most efficient and cost effective supply of goods and services and the development of an industry support base for strategic capabilities. They need not be incompatible. At times the strategic interests will call for specific levels of industry support which may result in closer relationships with particular suppliers. Such judgments require a clear understanding of the strategic priorities for industry. Case-by-case judgments in which circumstances will most likely favour sole or major roles for local industry, are:

- strategic priorities (where local industry involvement is needed to establish an industry capability to support an operational capability);
- where Australia is commercially competitive;
- where we have unique and important requirements that overseas suppliers are not able to meet, which reflect the peculiarities of our natural and strategic environment; and
- where overseas sourced supply is not sufficiently reliable, or overseas suppliers are or could be prevented from supplying due to political or national disclosure constraints.

6. Defence’s basic aim is to get value for money in its acquisitions and therefore its general strategy will be to avoid premiums for Australian industry support. However it recognises that sometimes, where there are strong strategic reasons for doing so and in only rare cases, premiums may need to be

considered. Defence's aim is to encourage local industry to be a more efficient and competitive supplier to the ADF. Specific strategic capability needs will continue to evolve as operational requirements and strategic capability development continues.

7. In seeking value for money, Defence will provide information to overseas firms about the strategic capabilities available in Australian industry, and will encourage overseas firms to assess the scope for cost effective Australian industry involvement. Where it offers equal or better value for money, Australian industry involvement will be preferred.

Specifying Australian industry involvement

8. Australian industry involvement may be specified in major capital (over $20 million) and minor capital acquisitions (usually those costing less than $20 million) and logistics programs. Where such involvement is specified, it will be set out in Equipment Acquisition Strategies and Requests for Tender.

9. AII has two components. The first component, Priority One, will specify the capabilities in Australian industry that Defence considers essential to a project and its through-life support. The second component, Priority Two, will indicate the capabilities in Australian industry that Defence considers desirable in, but not essential to, a project and its through-life support.

10. In accordance with current strategic guidance, each Priority (if specified) will generally be expressed in terms of support capabilities (eg repair, maintenance, overhaul, adaptation, and the provision of munitions and certain consumables), rather than in terms of manufacture, assembly or construction. This will not, however, rule out tenderers offering to develop relevant support capabilities in association with manufacture, assembly or construction.

11. Australian industry involvement will not be specified in terms of percentage levels of local content. Australian prime contracting will not generally be specified as essential.

12. There may be cases where, for strategic reasons, Defence seeks (for example) technology transfer to Australian industry, access to intellectual property or access to marketing rights as part of a procurement project. Relevant Australian industry involvement will be specified as Priority One or Priority Two. Tenderers, Australian and foreign, will need to indicate

how the relevant capabilities or rights will be transferred to Australian industry.

13. Selection criteria will be stated in tender documents, ranked in order of importance. Specific weightings will not usually be set out in tender documents.

14. To be compliant, tenderers must demonstrate that the Priority One component will be met. However, non-compliant options can also be put forward for consideration, if they provide offsetting benefits.

15. Although Priority Two capabilities will be considered desirable, tenders failing to provide for them will not be regarded as non-compliant.

16. Tenderers will not be required to submit more than one bid. However, to assist the tender evaluation process, tenderers should indicate (if possible) any premiums in meeting the elements of Priority One and Priority Two.

17. Tenderers may offer voluntary offsets on their own initiative. They should indicate any premiums associated with such offers.

18. Equipment and services produced in New Zealand may be acceptable **under Priority One or Priority Two** where this would be consistent with Australian strategic self-reliance objectives.

Availability of forward planning information

19. To enable industry to plan its participation in Defence acquisitions a range of planning documents on Defence programs are available. These include:

- declassified versions of the (unapproved) major capital equipment and facilities planning documents
- forecasts of expected expenditure on logistic support work
- forward program of activities for the Commercial Support Program
- major capital equipment program industry objectives
- forward procurement plans for capital equipment under $20 million.

Attachment

The current strategic guidance (Strategic Review, December 1993) identifies, in broad terms, that the following strategic capabilities have a high priority and would be sought from Australian industry where feasible and cost effective:

- Command, Control, Communications (C^3) - Increased support from industry in the software development and system integration areas, recognising that some technology transfer from overseas may be necessary. Security, integration and adaptation require considerable indigenous industry support.
- Intelligence - As for C^3, software support and systems integration are important.
- Surveillance - Advanced facilities for the integration and analysis of information from various sources. Maintenance and through-life support of these systems by Australian industry is a high priority.
- Weapons Platforms - The maintenance, repair and through-life support of weapons platforms is a high priority. Adaptation to meet Australia's environment is also a high priority. The production or manufacture of platforms will be pursued when they represent value for money or where it contributes to the development of capabilities and skills required for through-life support.
- Combat Systems - The maintenance, repair and through-life support of combat systems is important to the performance of weapon platforms. Especially important is the capability to integrate the weapon, C^3, navigation, electronic warfare and interface systems and the skills to adapt the systems to Australia's environment.
- Munitions - Defence will be looking for a combination of supply by Australian industry, for high usage items and for those items where the possibility exists for disruption of overseas supply, and stockpiling.
- Logistics Support, including transport and supply of consumables - Defence will make maximum use of facilities and services already available in the community where it is cost effective to do so.

The following industry capabilities will be of particular importance to Defence:

- electronics/optics: to support intelligence systems, systems integration activities, weapons systems and surveillance;
- communications and information technology: to support command, control and intelligence systems and critical management and administration systems, and to integrate these systems with specific weapon systems;

- aerospace: to support/maintain and provide infrastructure for operation of aircraft and their systems, and to adapt aircraft systems;
- shipbuilding and repair: to support/maintain ships and their systems, and to adapt those systems;
- munitions: to produce stocks of high usage munitions and to maintain sophisticated munitions such as missiles; and
- land vehicles: to adapt, repair and maintain vehicles suited to Australia's terrain and environment.

APPENDIX E: COMMERCIAL SUPPORT PROGRAM OUTCOMES AS AT 30 AUGUST 1994

Name	*Activity*	*Base*	*Contractor or IHO*[a]	*Defence positions evaluated*	*Contract value*	*Contract period*	*Annual recurring savings*	
					$m	*Years*	*$m*	*%*
ADFA Catering	Catering	ADFA (ACT)	Spotless	151	18	4	2.9	39
JSSC Base Support	Catering	JSSC (ACT)	AFS	23	3	4	0.3	26
ADFA Clothing	Clothing	ADFA (ACT)	IHO	7	2	4	0.0	0
NAS Nowra Aircraft Maintenance	Aircraft maintenance	NAS Nowra (NSW)	BAe	180	9	4	4.5	68
NAS Nowra Base Support	Base support	NAS Nowra (NSW)	IHO	143	21	3	1.4	17
HMAS PENGUIN Base Support	Catering	Penguin (NSW)	SHRM	89	9	3	2.7	47
HMAS CRESWELL Base Support	Catering	Creswell (ACT)	SHRM	107	16	3	1.6	22
Clothing Store Harman	Clothing	Harman (ACT)	Status Quo	9[b]				
Drivers - Harman	Transport	Harman (ACT)	Status Quo	5[b]				
Laser Airborne Depth Sounding System Support	System support	Multi	BHP Eng	na[c]	22	3	na	na

Name	*Activity*	*Base*	*Contractor or IHO*[a]	*Defence positions evaluated*	*Contract value*	*Contract period*	*Annual recurring savings*	
					$m	*Years*	*$m*	*%*
Watsonia Catering/Accommodation	Catering/Accommodation	Watsonia (Vic)	GMR	54	11	3	0.4	10
ADFHS Helicopter Maintenance	Aircraft maintenance	Fairbairn (ACT)	ASTA	100	11	3	1.0	14
Puckapunyal Base Support	Base support	Puckapunyal (Vic)	SERCO	280	81	5	1.2	7
HQ Training Accommodation Catering	Catering	Geo Heights (NSW)	P&O Catering	22	2	3	0.4	26
Moorebank Military Area Messing/Accommodation	Catering/Accommodation	Liverpool (NSW)	P&O Catering	122	20	5	2.0	33
Army Clothing and Tailoring Canberra	Clothing	RMC (ACT)	ADI	13	2	5	0.2	38
Basic Flying Training	Flying training	Point Cook (NSW)	BAe ANSETT	na[c]	4	3	na	na
Air Movements Laverton	Air movements	Laverton (Vic)	Melb Jet Base	19	3	4	0.4	35
P3C Depot Level Maintenance	Aircraft maintenance	Richmond (NSW)	Hde Havilland	42	20	11	0.5	22
Fairbairn Catering	Catering	Fairbairn (ACT)	AFS	91	12	5	2.4	50
PC9 Pearce Maintenance	Aircraft maintenance	Pearce (WA)	Airflite	176	20	6	6.1	64

Name	*Activity*	*Base*	*Contractor or IHO*[a]	*Defence positions evaluated*	*Contract value*	*Contract period*	*Annual recurring savings*	
					$m	*Years*	*$m*	*%*
F111 Maintenance	Aircraft maintenance	Amberley (Qld)	IHO	353	48	5	9.4	49
Fairbairn Base Support	Base support	Fairbairn (ACT)	IHO	83	4	2	2.1	51
RAAF Williams Catering	Catering	Williams (Vic)	Spotless	171	32	5	3.0	32
RAAF Surface Finishing Facilities	Surface finishing	Richmond (NSW) Amberley (Qld)	IHO	57	9	3	0.7	19
HS748 Avionics East Sale	Aircraft maintenance	East Sale (Vic)	IHO	22	6	6	0.1	11
PC9 Maintenance East Sale	Aircraft maintenance	East Sale (Vic)	Airflite	44	10	6	0.6	24
Woomera/Nurrungar Base Support	Engineering support	Woomera Nurrungar (SA)	IHO	113	5	3	0.7	29
Woomera/Nurrungar Base Support	Base support	Woomera Nurrungar (SA)	ADI	36	21	3	Savings to USAF	16
DSTO Salisbury Support Services	Engineering support	Salisbury (SA)	IHO	142	40	5	0.3	12
DSTO Salisbury Support Services	Information Systems and Telecommunications	Salisbury (SA)	IHO	49	23	5	0.6	12
DSTO Salisbury Support Services	Property Materiel	Salisbury (SA)	SERCO	79	14	5	1.5	32

Name	*Activity*	*Base*	*Contractor or IHO*[a]	*Defence positions evaluated*	*Contract value*	*Contract period*	*Annual recurring savings*	
					$m	*Years*	*$m*	*%*
DSTO Salisbury Support Services	Media operations	Salisbury (SA)	BAe	18	3	5	0.3	32
JSSC Base Support	Base support	JSSC (ACT)	AFS			See footnote [d]		
HMAS CRESWELL Base Support	Base support	Creswell (ACT)	SHRM			"		
HMAS PENGUIN Base Support	Base support	Penguin (NSW)	SHRM			"		
Navy Accommodation Sydney/Canberra	Hospitality	Kuttabul (NSW) Harman (ACT)	Status Quo[e]	0				
Navy Clothing Sydney	Logistics	Kuttabul (NSW)	Status Quo[b]	4				
Navy Accommodation Adelaide	Accommodation		KARIDIS[e]	0	2	5	0.1	14
Defence National Storage and Distribution Centre	Storage Distribution	Moorebank (NSW)	IHO	1223	59	5	19.3	62
Broadmeadows Logistics Battalion Base Support	Catering Accommodation	Broadmeadow (Vic)	IHO	33	2	2	0.3	23
Broadmeadows Logistic Battalion Security	Security	Broadmeadow (Vic)	MSS	7	2	5	0.2	38
Hobart—Logistics and Domestic Services	Storage Distribution	Hobart (Tas)	IHO	42	5	5	0.5	37

Name	*Activity*	*Base*	*Contractor or IHO*[a]	*Defence positions evaluated*	*Contract value*	*Contract period*	*Annual recurring savings*	
					$m	*Years*	*$m*	*%*
Myambat Supply Company Base Support	Base support	Myambat (NSW)	IHO	7	2	5	..	10
Army Survey Regt Digital Topographical Support to ADF	Topographical support	Fortuna (Vic)	IHO	373	70		11.0	41
RAAF Amberley Iroquois Servicing	Aircraft maintenance	Amberley (Qld)	Hunter Aircraft Engine Services	4	8	7	0.1	6
RAAF Williams Base Support	Base support	Point Cook (Vic)	SERCO	53	5	5	1.7	64
Base Calibration Centres	Calibration	Multi	ADI	125	36	6	3.0	33
RAAF Wagga Catering	Catering	Wagga (NSW)	SHRM	105	10	5	3.0	49
Food Production MRL-Scottsdale	Production	Scottsdale (Tas)	IHO	5	1	3	0.2	30
Food Science MRL-Scottsdale	Food science	Scottsdale (Tas)	IHO	19	6	5	0.1	11

.. Less than $50 000

[a] IHO denotes in-house option was successful
[b] Pre-CSP method retained
[c] No previous in-house activity
[d] Included in catering — see above
[e] No pre-CSP activity — commercial contractor retained
Source: Department of Defence, 1994.

APPENDIX F: CONSULTANTS' REPORT ON THE CSP

THE STRATEGIC FOCUS OF THE COMMERCIAL SUPPORT PROGRAM

Report to the Industry Commission

Dr Mike Gilligan and Dr Stewart Woodman

(foreword by Professor Paul Dibb)

Strategic & Defence Studies Centre

Australian National University

May 1994

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FOREWORD

Through my involvement in the Force Structure Review of 1991, I am keenly aware of the priority that the Government attaches to the Commercial Support Program (CSP). It is most satisfying to see the progress that has been made in less than three years — with nearly $90m annual savings projected for Defence and some $400m in contracts let to Australian industry.

That it is timely to take stock has been recognised by the Department of Defence, with its earlier commissioning of an independent consultant's review of CSP. The Industry Commission's inquiry into defence procurement has been welcomed by Defence as another aid to its evaluation of the CSP.

This paper offers an important and helpful additional perspective, deriving as it does from the fundamentals of Australia's strategic policy. The issues raised here are relevant to the way ahead for Australia's defence generally, and the CSP in particular. The nature of the conflicts to which Australian defence planning gives priority in the defence of Australia has a special meaning for the CSP. That is, greater integration of the community and industry into the support of our defence — whether it be in the north, south, west or east of the continent — is a policy imperative. Indeed, this is recognised in the Government's latest strategic review (*Strategic Review 1993)*, in calling for more of a national dimension to defence at this time when industrial restructuring is underway. Defence must, of course, continue to look for efficiency and cost effectiveness in the support provided by industry. But as *Strategic Review 1993* acknowledges, industry now plays 'a central role in our national capacity for defence'.

We should not lose sight of the fact that Australia is developing a defence force primarily designed for the self-reliant defence of Australia. In this context, endorsed strategic guidance gives priority to capabilities relevant to 'short-warning conflict'. The nature of conflict in low level contingencies that might arise with relatively little warning means that the risks to the civil population at large would be little different to civil contractors supporting operations from bases around Australia. Sensible measures have been highlighted in this report that reduce risks to civil contractors and enable any move to support combat operations in credible contingencies in the north of Australia to be managed efficiently.

I commend the key principles identified in this report (see pages 233–234). They should be considered in any revised planning for the CSP, noting that this will mean another substantial step towards a truly national defence effort. A key recommendation is that the current distinction in the CSP between 'core' and 'non-core' functions of the ADF needs to be widened to accord more closely with the realities of Australia's unique strategic circumstances. This transition should be worked through progressively and carefully and with a keen view to cost effectiveness and practical outcomes. But there is little place for any serious reservations about industry's potential to meet Australia's defence demands in a wide range of circumstances and geographical locations. Closer cooperation between the ADF and industry in providing combat support throughout the continent in peacetime will also help to develop industry's capacity to support the ADF in conflict. The striking examples in this report from British and American forces show how much can be achieved in the commercial support of forward based operations. And the constrained financial assumptions for our force structure and forward planning require that we embrace those opportunities for even closer integration that produce savings. This is essential to maximising the operational effectiveness of the ADF over the next decade.

In this way, the potential of the national infrastructure can be realised more efficiently to underpin more effective defence operations. I recognise that managing the transition will be a demanding task — Defence and industry each will be under constraints affecting the rate of change. The end result, however, will be a more comprehensive integration of the defence force with the civil community and the release of further resources for the development of the ADF's combat capability.

Paul Dibb
June, 1994

INTRODUCTION

The Force Structure Review of 1991 called for greater participation by the Australian community in support of Defence. The reason for this was the concern that continued development of the combat capability of the ADF required resources to be allocated more efficiently in the supporting areas of Defence. That is, a measured shift in resources should flow from 'tail-to-teeth' elements of the ADF.

A separate impetus for change was the concept of 'a partnership in Australia's defence' (between military and civil resources) put forward in Alan Wrigley's review of *The Defence Force and the Community* completed in 1990. As a result, the Government set up an interdepartmental committee to report on commercialisation options for defence, which initiated a concerted thrust within defence to make greater use of wider national resources.

The Commercial Support Program

The Commercial Support Program (CSP) was devised as a tool for implementing that policy. The aim of the CSP is to 'promote the transfer of activities between Defence and industry where it is operationally feasible, practical and cost-effective to do so'. (CSP Update No. 1, September 1991)

The CSP is to be implemented under a three tier scheme. Tier 1 identified a number of specific activities for which commercialisation, prima facie, seemed a reasonable option. These were the activities identified by the IDC on the Wrigley Review 'where the introduction of commercial support may not impair readiness, where industry capacity exists and where there is a potential for effective commercial support'. They included:

* catering
* base support
* aircraft maintenance
* clothing stores and tailoring
* training
* motor transport fleet.

Tier 2 has required the continuous and systematic examination by the eight Program Managers within the Defence portfolio of a wider range of activities which could be suitable for commercialisation or civilianisation. Its aim is to ensure that all non-core activities are tested and, where appropriate, subjected to

competition. The complete list of candidates for Tier 2 has just been submitted by Program Managers for consideration within the Defence Organisation.

Tier 3 provides managers at the operational level with the opportunity to initiate CSP management review within their own area of responsibility.

Progress with CSP

The CSP has been running now for about two and a half years. Before turning to its achievements it is worthwhile remembering that, even before CSP, the amount of commercial support provided to the ADF was very large — greatest for the Navy but substantial in the other programs also. What has been achieved in CSP is an add-on to this already large base of partnership between Defence and the community.

The CSP Outcomes Summary as at 17 May 1994 (*CSP Update*, Issue 17) shows the number of contracts let or in-house directives issued so far, along with other key indicators:

*	CSP Evaluation decisions	51	
*	Commercial contracts	31	(61% of total)
*	In-house Directives	16	(31% of total)
*	Status quo retained	4	(8% of total)
*	Projected annual savings	$87m	
*	Savings as percentage of total	31%	
*	Number of positions tested	4800	

In total all the contracts let to industry and in-house directives total some $700m, divided about equally between both. Clearly much has been achieved in the short time since Defence embarked upon CSP. It is no small task to develop a methodology, and the necessary management and decision structures and to gain the interest of industry in an innovation of this sort.

It should be noted that the Wrigley Review identified very considerable scope for further savings — some $400m in total. The Government's IDC largely agreed with Wrigley on the extent of the commercialisation that should be possible — leading in its judgment to savings of some $350m per annum. The recommendations of the IDC were largely endorsed by Government. In terms of the targets set by Government, the CSP is thus about a quarter of the way down the track.

Reasons for this Study

When looking at the scope for further expansion of civil support for defence, it quickly becomes evident that, within the current CSP methodology, its potential is determined very much by judgments on what are deemed to be core and non-core activities. Only those activities that are non-core are eligible for commercialisation (although even then some of these may be excluded).

The Industry Commission, in addressing its reference on defence procurement, came to that conclusion and asked for a study that assesses the principles by which the concept of core and non-core has been applied in the CSP. Clearly underlying this request is the wish to assist the CSP in its aim of promoting the transfer of defence activities to industry. The terms of reference for this study are at Attachment A.

A number of people have generously given time and advice in the course of this study, see Attachment B.

The study has been able to draw on almost three years of CSP development to assist it. Its analysis and conclusions have, of course, benefited from that hindsight. If the commentary sometimes seems critical, that should be balanced against the deserved recognition of the enormous gains that have been made in this short time.

The experience of other countries who have had time to develop some expertise in the commercialisation or the civilianisation of some defence activities provides a useful context against which Australia's progress and future potential in this area can be compared.

Australia's public structures have drawn most on the British model. So what is happening now in the UK is a helpful reference point. There, a program of commercialisation has been in place across the public sector for more than a decade, initiated by the Rayner reviews and the formation of the Efficiency Scrutiny Unit within the Prime Minister's Office in the early 1980s.

British defence has therefore had longer experience with what it calls 'market-testing' of activities for commercialisation. Specific defence examples are described in detail later. A general observation is that the British experience has produced a progressive deepening of respect and trust between the military and commercial participants as practical experience has accumulated in areas that were previously regarded as unusual for civil participation. It is reasonable to expect that change in Australia too.

In the United States there is renewed interest in 'commercialisation' across all government agencies. This has to be seen in the context of a culture that has naturally shown a far greater tendency to turn to the private sector for support

than would be the case in Australia or the UK. As a general comment on the current US situation, the debate is not about how much further to draw upon the private sector for support to government (as the value of progress here is not at issue) but rather how to free up the legislative restrictions that tend to inhibit the efficiency of that support link. Examples of US defence use of civil support are also outlined later.

The Approach Adopted

In looking at the scope for further progressing CSP, it is important to look not just for areas into which commercialisation might be extended but to understand how the process has worked up until now.

In particular it is important to understand that the process by which CSP decisions have been taken has been devolved to the eight Program Managers, consistent with the government's emphasis on Program, Management and Budgeting. This is not likely to be a problem so long as clear policy guidance is available for those Managers to operate within. Accordingly, the study has gone to some length to assess the policy guidance for CSP and its subsequent influence — particularly in relation to the core/non-core matter — against overall defence and strategic policy objectives.

A comprehensive report by Ernst and Young on experience with the general workings of CSP has addressed many areas of the CSP evolution — but not the core/non-core foundation (apart from recognising it as critical). This study represents the first independent revisiting of the initial CSP policy basis, and its subsequent refinements, since inception.

Its starting point is to outline the key planning parameters (and hence guidance to CSP managers) set out in the *CSP Manual.* These are then assessed against overall strategic defence policy and a range of factors which may impact upon the realisation of those objectives in the CSP context, including overseas experience. By way of testing some of the key principles under review, the study has also looked in greater detail at a case study of how CSP has been implemented in relation to F-111 aircraft maintenance.

This is not to single out the F-111 activity for specific treatment. It simply happens to be a well-documented base on which to draw — from the initial recommendations of the Interdepartmental Committee (IDC), through the logic subsequently developed by the responsible Program (in this case, the Air Force) and up to the eventual CSP outcome.

CURRENT CSP POLICY

The tool which holds the CSP process together, providing both consistency and direction, is the CSP Manual. The Manual in its current form was developed within a quite short time-frame to speed the implementation of the CSP. It was required to draw together material across a large number of topics into one fold for dissemination to managers and industry. In that role it has done an admirable job.

But it would be surprising if, on revisiting that work with the benefit of almost three years of hindsight, areas for improvement could not be found. Indeed, the CSP Manual itself (p. 2.3) notes that 'over time, changing strategic circumstances, government policies, internal management reviews and revisions to operational concepts may lead to redefinition of the boundary between what is 'core' and what is 'non-core'. What follows should be understood in that context.

The Criteria for Core/Non-Core

The distinction between 'core' and 'non-core' activity is, as noted above, the fundamental criterion in the CSP Manual for determining whether a particular activity might be subject to the CSP. The Manual specifies that whether an activity should be regarded as 'core' turns on a number of criteria. These are:

a. combat and combat related requirements;

b. essential combat support requirements; and

c. department of state considerations.

It might be expected that the explanation of these concepts would place considerable emphasis on the nature of the conflict situations accorded priority in strategic guidance. In this respect, however, the CSP Manual is disappointing. Its discussion of the strategic framework is limited primarily to noting those documents or statements which endorse the use of civil support rather than seeking to develop those references into useful guidance. Instead, the Manual seeks to draw its distinctions against narrower and quite legalistic criteria. In attempting to define key terms such as 'combatant' and 'civilian', it draws heavily on the Laws of Armed Conflict, particularly the Geneva Conventions of 1949 and the subsequent Protocols to them. These are then linked to other regulations such as Section 43 of the Sex Discrimination Act of 1984 to draw a distinction between 'combat' and 'combat-related' duties. The latter are:

> ... duties (other than combat duties) requiring a person to work in support of, and in close proximity to, a person performing combat duties, being work performed in

> circumstances in which the person performing the work may be killed or injured by an act of violence by an adversary. (*CSP Manual,* p. B-4)

While the Manual admits that some combat support functions can be civilianised, it goes on to conclude that:

> ... the conditions and risks of the battlefield dictate that combat support elements within or in close proximity to the combat zone could well be required to fight or as a minimum be subject to the dangers associated with the combat environment. Therefore combat support functions will generally be regarded as combat or combat-related activities that are normally required to be undertaken by military personnel. (*CSP Manual,* p. B-4)

In one respect, it might be quite reasonable to argue that program managers should be equipped to interpret this guidance within the context of a sound understanding of key strategic principles — such as the likelihood of combat, warning and preparation times and the scale and intensity of priority contingencies. Outcomes to date suggest that this may not always be the case.

Indeed, the Manual goes on to limit further the geographical region within which civilians might be involved in combat support tasks:

> Furthermore, because of the 'in close proximity to' caveat, it can be deduced that persons serving in a location within a Military Area of Operations (AO) should generally be regarded as being in close proximity to and be liable to injury or death from enemy action. Accordingly any person undertaking combat-related duties within an AO, or travelling into an AO with the purpose of committing or participating in the commission of an act of violence, should generally be a member of the ADF. (*CSP Manual,* p. B-4*)*

The problem with this is that the definitions of 'area of operations' or 'combat zone' are not clearly established in the CSP Manual. Indeed, a number of the other references to those concepts could easily be interpreted as excluding any civil support for defence in northern Australia.

The definition of 'Defence-Related Infrastructure', for example, which is seen as a prime candidate for commercialisation, refers to activities:

> ... normally associated with fixed base support outside the Area of Operations (AO). They are normally integral to the civil infrastructure or industrial base, are accomplished in clearly recognisable safe haven or national population centres, and do not lend themselves to military deployment or operation within contingent areas of operation. (*CSP Manual,* p. B-10)

Similarly, in relation to fixed bases in the north of Australia, the CSP Manual notes that:

> Temporary or 'bare' bases are only used intermittently in peacetime, but continuous use in contingent circumstances is planned. Commercial support prospects at such bases would be limited because such bases would probably be in an AO in contingency or

> emergency situations, when significant personnel are deployed there. On the other hand, in the case of established northern bases, which would potentially be an AO in a contingency, commercial support opportunities could be pursued in peacetime, recognising that the Service might need to reserve posts in the south against the possibility that some contracted tasks might need to be taken over in a contingency. (*CSP Manual*, p. B-11)

The Laws of Armed Conflict

It is open to question whether the impact of the Laws of Armed Conflict, on which much of the core/non-core distinction is ultimately based, is as absolute as the brief commentary in the CSP Manual suggests. Here, the focus in the Manual is on the distinction between combatants and civilians and how this relates to combat and combat-related tasks. The key questions for Australia, however, are whether it is reasonable to use civilians in combat support roles, and how such use is affected by Australia's obligations under Article 58, Section IV of Protocol 1 Additional to the Geneva Convention of 1949.

The Convention itself (Section 4A(4)) clearly envisaged a role for civilians in a number of areas, including 'civilian members of military aircraft crews, war correspondents, supply contractors, members of labour units or of services responsible for the welfare of the armed forces'. The impact of Protocol 1 is more restrictive. It places an obligation on the Government 'to the maximum extent feasible' to 'endeavour to remove civilians from the vicinity of military objectives' (Article 58(a)) and to:

> ... take the other necessary precautions to protect the civilian population, individual civilians, and civilian objects under their control against the dangers resulting from military operations. (Article 58(c))

The Laws of Armed Conflict do not preclude civilians being used in support of the national defence effort provided they do not participate in 'acts of war which by their nature or purpose are likely to cause actual harm to the personnel and equipment of the enemy armed forces'. What they do require are judgments to be made about how clear a distinction can be drawn between the military and the civil community, the type and degree of risk that a civilian supporting the defence effort might be subject to, and the nature of the military objectives in the particular conflicts.

In Australia's current strategic circumstances, the application of these principles is influenced significantly by the fact that the nation faces no threat in the foreseeable future. Furthermore, the prospect of a major conflict directly affecting Australia's security could only arise in the longer term, would be preceded by substantial warning, and is not a force structure determinant. Care needs to be taken that the Protocols do not inadvertently exclude the substantial

benefits from civil support available to defence training, exercise and force sustainability in peacetime. Should strategic circumstances deteriorate, there would be a range of options open to Australia to meet the unfolding circumstances — transition to military status, waivers under the law, etc.

Where the Protocols do become relevant is in those conflicts that it is assessed could occur within shorter time frames should strategic circumstances deteriorate. In those conflict situations, it will frequently not be possible to make the clear distinctions between civil and military roles on which many of the provisions in the Geneva Conventions or the Protocols to them are based. Similarly, judgments about risk will relate to the likely nature of hostile operations, priority targets for the enemy, and the extent to which civil life will or will not be subsumed by the imperatives of military operations.

Advice made available by the Department of Defence on the legal implications of the Geneva Convention confirms that it is not an easy document to interpret. It can only be understood in the context of the negotiations that led up to it. That understanding then can be helpfully applied only in the context of the type of conflict that Government policy gives priority to in defence planning.

There are, of course other reasons which may militate against the use of civilians in some combat support roles. These include where there are very short readiness states for specific capabilities, where it is considered essential for operational effectiveness that particular personnel be under military command, and where there are strong grounds for concern that civilian support might not be forthcoming or sustainable in conflict. Each of these judgments similarly relates to both the nature of the conflict and the particular tasks being undertaken.

The situation is not helped by the blanket definition in the *Strategic Review 1993* that:

> 'combat-related' means command and communications, field and flight-line maintenance, tactical transport, combat and combat-zone engineering support, and combat-zone support generally. It includes logistic support in areas of operation.' (p. 41)

Unless such definitions are placed squarely within the overall Australian defence policy context, they support only a cautious and limited approach to implementing the CSP in northern Australia.

THE ELEMENTS OF STRATEGIC GUIDANCE FOR CSP

Against this background, this study has sought to evaluate just what is the nature of Australia's defence planning contingencies and how this relates to other considerations in the CSP process.

In doing so, it is important to recognise that both the Geneva Conventions and the concept of an Area of Operations had their origins in quite different strategic contexts to the issues currently facing Australian defence planning. There are also other aspects of the defence planning process, most notably evolving civil-military relations and the use of wider national resources, pushing in the other direction. The critical factor is to establish the appropriate balance between these different considerations in relation to Australia's strategic circumstances.

The starting point must be the nature of the conflicts in which Australia considers its Defence Forces may need to operate, or at least to which it must have the capacity to respond. In the absence of specific threat, these have been developed to include the range of contingencies that could arise in the defence of Australia, taking into account the nation's geography and the overall level of military capability available within Australia's immediate region. Regional capabilities are measured in so far as they can be realistically applied, including an assessment of Australia's own relative force structure.

The Nature of Conflict in the Defence of Australia

The possible conflict situations that are used to determine ADF capabilities and operational concepts are grouped under the term 'Short Warning Conflict'. They could, according to the Strategic Review 1993, take many forms:

> Among the easier operations for an adversary would be attacks on Australian assets and interests in the 'sea-air gap', which lie between Australia and the archipelago to our north and north-west. These could take the form of harassment from air or sea; targets might include our sea lines of communication (SLOCs — including coastal shipping) and off-shore resource activities such as oil and fishing. An adversary might seek to mine maritime approaches, ports and shipping focal areas. Limited air and ground force attacks on Australian territory would also be possible, and could include sabotage of defence and civil installations. Australia's off-shore territories would be especially vulnerable.

Other official documents since the Dibb *Review of Australia's Defence Capabilities* in 1986 and *The Defence of Australia 1987* White Paper have described those contingencies in similar terms but under different categories such as 'low level' and 'escalated low level' conflict. *Australia's Strategic Planning in the 1990s* drew a useful distinction between situations where the hostilities would be indirect, hence attempting to exploit Australia's geo-

strategic weaknesses, and those where the adversary was prepared to engage the ADF directly.

Higher level conflicts, which might involve sustained, joint intensive operations against Australia, are not considered credible without a substantial force build-up by another regional country. This has been estimated as requiring at least seven years' preparation by an enemy, enabling substantial military preparation on Australia's part. Official planning endorses the continuation of 'some planning, monitoring and expertise relevant to major conflict' but it 'should not determine our force structure or preparedness' (*Strategic Review 1993*, p. 43*)*.

Without attempting to be more definitive about the nature of defence of Australia contingencies, a number of key conclusions can be drawn that provide a context for judgments on the scope and appropriateness of civil involvement in the defence effort. They are that:

- there will be many situations in which the existence of hostilities will not be clear cut. Even during a period of considerable political tension, normal civil activities are likely to continue in Australia's northern approaches;
- while hostilities could occur over a wide geographic area, many will be maritime in nature. Those actions which do occur on the Australian mainland will frequently be covert and even disavowable;
- direct attacks against important military and civil infrastructure may occur (primarily by aircraft or special forces) at the upper end of the contingency spectrum but they will be limited in scale and frequency;
- attempts may be made to disrupt communications and supply links to and within the north, whether by land or sea, but they would be directed primarily against the means of movement (ports, railway lines, communications towers, bridges etc.). Sustained or systematic harassment of vehicles, ships or aircraft, except by barrier strategies such as maritime mining, is beyond current or prospective regional capabilities;
- while random acts of violence could be exploited to alarm the northern population, and the taking of occasional civilian hostages is possible, specific targeting of the civilian population would be most unlikely;
- an adversary's actions might be either quite tightly focused on a specific issue and/or geographic area or be more widespread to exploit the length of Australia's vulnerable northern coastline. Neither approach would, except perhaps in the vicinity of Darwin, place a significant proportion of Australia's northern population under major or constant threat;

- the higher and more direct the level of hostilities, the less frequent and more geographically focused an adversary's actions are likely to become; and
- an important option for the adversary would be, by quite selective hostilities, to attempt to commit Australia to a disproportionate and protracted protective presence in the north. The costs could be used to undermine national enthusiasm for the dispute and to extract concessions for Australia in any negotiated settlement.

Factors Influencing Australia's Response

These factors, together with the features of Australia's northern environment, will significantly shape political and operational response options. In particular:

- in all but the more serious situations, and then only probably in the vicinity of Darwin and other coastal population centres, civil and military activities are likely to continue in tandem across a wide area of the north of Australia. There will not be a clearly defined 'area of operations' in the traditional sense and, beyond broad area surveillance and reconnaissance roles, the focus of ADF operations is likely to be moving constantly;
- there will be considerable pressure on the Australian Government, for both political and economic reasons, to maintain civil life in the north as normally as possible. Its strategy should also be to do so in as resource efficient a manner as possible;
- ADF deployments to many parts of northern Australia will frequently be either precautionary or primarily to support maritime operations. Apart from forward operating bases proximate to the northern archipelago, the danger of direct attack on those facilities will generally be very low;
- the size of the northern environment, the distances between potential targets, the small numerical size of the ADF, and the options for an adversary point to a ground force strategy based on mobility and speed of deployment rather than more static, protective concepts. The priority for consistent, high-level protection will be for forward military operating and support bases;
- the threat to military infrastructure beyond the combat radius of hostile enemy aircraft will be negligible apart from the danger of isolated terrorist incidents. It is also questionable whether targets on Australia's more protected eastern seaboard, including Cairns and Townsville, could be considered vulnerable to attack, whilst opportunities for aircraft incursions

in the north and north-west will become limited as Australia's wide area air defence capability, underpinned by the Jindalee network, matures;

- high rates of effort are likely to be required from only specific types of ADF assets. In particular, those related to surveillance and intelligence (including Army's Regional Force Surveillance Units) and maritime patrol and response. While elements of other capabilities will need to be brought up to higher states of training and readiness, their tactical deployment and use in actual combat situations will generally be less frequent; and
- should an adversary wish to conduct any sustained, direct hostilities against Australia, this would require a build-up of forces and enhancement of infrastructure in the more proximate parts of the archipelago. Australia's intelligence capabilities are able to provide early warning of any such developments.

Implications for Civil/Military Relations

The implications of these facts for relations between the Defence Force and the civilian community are severalfold:

- except in specifically designated areas, which may change during the course of a contingency, civil and military authority will continue to be exercised side by side. Special defence emergency legislation may limit some civilian freedoms but over a wide area civil political and law enforcement authorities will continue to be responsible for day-to-day administration;
- the largely covert nature of any hostile ground force operations on Australian territory may frequently make it difficult to ascertain whether an incident is the result of action by foreign military forces. A combined ADF/police response may well be necessary;
- given the breadth of the northern environment and the advantage of local area knowledge, effective military operations will depend on widespread support from the local communities, especially in terms of surveillance in relation to unusual movements. This will be in addition to, and complement, the activities of locally based Reserve units;
- the civil community will still be dependent on the maintenance of essential services and supplies. The ADF does not have the capacity to duplicate these services for its own specific purpose and to attempt to do so would incur major strategic costs and undermine the ADF's operational effectiveness;

- effective ground force operations in the north will depend on mobile, rapid reaction forces operating on light scales. They will work closely with local civil authorities, are likely to draw non-military supplies from the civil infrastructure (eg food and POL) and may requisition local skills (eg repair and maintenance) or equipments;
- in some instances, that interaction may only be transitory. In others, however, around a forward surveillance or command post or an area headquarters it may be for the duration of the conflict. In those circumstances, the distinctions between the civilian community and combat support for the ADF may become very blurred; and
- importantly, not only will the balance between civil and military authority change with the nature and level of the contingency. It may also vary considerably across the breadth of northern Australia.

Forward Operating Bases

In the context of the Commercial Support Program and the distinction which it draws between 'core' and 'non-core' functions, particular considerations arise in relation to the manning of forward operating bases. The situation is not, however, as clear cut as an initial reading of the CSP Manual may suggest:

- most of the major bases and their supporting infrastructure in northern Australia fulfil dual civil-military functions and are often closely located with the civil community. While many aspects of their operations may be placed under direct military control, denial of the use of many of these for the movement of people and supplies would have a major impact on the civilian economy and administration;
- those bases will often be dependent on the adjacent civil infrastructure for the supply of essential services such as water, electricity and sewerage and draw on the same stock of general supplies including food, medical support and fuel. That infrastructure, which would be difficult to protect comprehensively, may well be as critical a target for the adversary as the bases themselves, especially in situations of indirect hostilities;
- as the intensity of ADF operations in northern Australia increases, it can be expected that there will be a greater demand for a range of civil facilities such as engineering works and slipway facilities. This would reflect higher operational demands and the importance of maintaining operational units at their maximum effectiveness without recourse to support facilities in southern Australia;

- some of these could not be duplicated at military establishments within the time-frames envisaged for short warning conflict. It may also be extremely costly to do so, given the lack of on-going military demand in peacetime;
- given the nature of Australia's northern environment and the scale of its defence task, a priority for forward deployed ADF combat support units will undoubtedly be to sustain those force elements responding tactically over wide areas with little if any support infrastructure. These will also be the areas in which it is more difficult to match civil support to the short times and ad hoc response nature of military operations;
- there certainly may be circumstances in which it is considered desirable to man one or two forward operating bases solely with military personnel. This would be primarily to ensure full military control over combat operations that may need to be conducted with little warning and considerable intensity. That same imperative would be unlikely to apply to bases further inland, such as Tindal, or to those further removed from the focus of hostilities;
- any concerns about the dependability of civilian personnel in situations of direct threat need to be tempered by:
    - a realistic assessment of how frequently and over how wide an area that may occur;
    - the need for continued dependence on civil support outside those bases, including the maintenance of essential services and supply lines; and
    - the inability of the ADF, due to numbers, operational commitments and in many circumstances limited legal authority, to take responsibility for the maintenance of the civil community and the management and the operation and protection of the communications and re-supply infrastructure; and
- indeed, in the types of conflict that might arise in Australia's strategic circumstances, civilians may well enjoy greater security working in northern military bases where comprehensive security measures are in place than in civilian support roles.

All of these factors add up to a 'battlefield' bearing little resemblance to the characteristics of earlier conflicts involving Australia's forces. It is one which will require continual, thoughtful and positive integration of national resources into our defence effort.

Current Combat Support Arrangements

This necessarily close nexus between ADF operations and civil support in northern Australia is clearly reflected in key aspects of defence planning. The *Strategic Review 1993* gives a high priority to implementing 'a unified national response in which available civil and military resources could be marshalled and effectively coordinated'. In addition to coordinated policy advice, it also calls for 'a civil-military interface in the theatre of operations'!

The Review goes a step further than earlier policy documents by noting that:

> Civil defence is an integral part of national security. In conflict, peacetime civilian organisations, expanded as necessary by specialist skills and manpower from the community, would be called on to meet our civil defence needs. The State and Territory emergency management organisations would play a critical role, with Federal policy oversight and coordination. Civil defence planning and operations should be conducted in close cooperation with the ADF through the established civil-military coordination processes, which should be exercised during peacetime. *(Strategic Review 1993*, p. 51)

Just what is meant by the term 'civil defence' in relation to more limited attacks against Australia is, however, open to question. A decade ago, it was used in relation to the protection of the population against the possibility of a nuclear war and, in that context, the role of bodies such as the state emergencies services in terms of evacuation, relief supplies and treatment of casualties was clear cut.

The Review reflects those earlier preoccupations by noting that

> the function of civil defence is to protect the civilian population against the dangers of conflict, to help the civilian population recover from the immediate effects of hostilities, and to provide the conditions necessary for survival of the civilian population. (*Strategic Review 1993,* p. 51)

What is clear, however, is that the overall thrust of this planning foresees both a significant civilian presence in the north continuing during hostilities and a close integration between civil and military resources in providing for the nation's defence. It would support an expansive, rather than a narrow, interpretation of the opportunities for civilians to undertake combat support roles.

Some practical guidance as to potential scope for this can be gleaned from specific measures that have been taken or tested to support ADF deployments in northern Australia. As part of the Kangaroo series of exercises, arrangements have been developed and tested for close operational coordination between the State and Federal civil agencies (including the police) and the military. These extend down to the local level and clearly involve the sharing of intelligence and operational decision-making and, possibly, the co-location of headquarters.

The development of practical operational links has also proceeded between the ADF and civilian agencies. The Coastwatch organisation, a service provided by a civil contractor, has been enlisted to contribute intelligence on exercise activities. That organisation's accumulated local knowledge and its low level, eyeball coverage of the littoral zone would be difficult to replace in a contingency. Similarly, ADF tactical deployments across the north do rely on the local communities and infrastructure for non-military supplies. Agreements have been reached with the civil airlines to provide the strategic transport capability to northern bases, freeing ADF assets for more immediate, tactical tasks.

What emerges from this review of the characteristics of the various conflict situations that shape Australia's defence planning, and of other aspects of operational planning, is that they do not support the largely legalistic interpretation of the scope for civil support to defence in northern Australia contained in the CSP Manual.

It is inconceivable that a defence of Australia could be mounted without the intimate support of national resources across a vast range of functions. The ADF already has civil support embedded in its planning in the north and recognises its criticality. Each time it undertakes any significant training or operation, such as in Kangaroo exercises, those activities confirm the essential link between the Defence Force and the civil community.

For most of the ADF, civil support would be critical to the greater efficiency of training operations, with no foreseeable prospect of there being major conflict in defence of Australia. We reiterate that we would have substantial preparation time in which to reassess and rearrange if the need arose in terms of major threat.

Furthermore, for any short warning time contingencies, there is most unlikely to be a clearly defined area of operations. There will be considerable pressure to maintain a 'business as usual' approach, and civil and military authority will generally be exercised in tandem. Contrary to the thrust of the CSP Manual, the levels of conflict relevant to the defence of Australia today, and its nature, suggest that there would not be a lot of distinction in risk for northern inhabitants, military or civil, apart, of course, from the actual combat personnel.

OTHER FACTORS AFFECTING THE IMPLEMENTATION OF CSP

While a more comprehensive development of strategic policy thus opens up options for further extension of civil support for defence, there are a number of

other factors that need to be taken into account if the full potential of the CSP against these strategic criteria is to be realised. These are:

* the extent to which the ADF can reasonably expect to rely on civilian support in a contingency;
* whether or not CSP proposals are being developed in a way that makes the whole process attractive to industry; and
* how far other operational needs, especially preparedness and surge or expansion, might impact on the scope for civil support.

In addressing these issues, it has not been possible within the available time-frame to assess more than a small number of examples in either the Australian or overseas contexts. The particular examples discussed, especially Australia's experience with the F-111, should be seen therefore not as specific projects to be applauded or condemned, but rather as a litmus test as to whether further investigation might be useful in these areas.

Civil Support in a Contingency

Significant civilian support for operations in the defence of Australia is already integrated into defence planning. It is reasonable that the ADF have confidence that the civil contribution can be relied upon in those contingencies that are given priority.

Several precedents exist that should give the ADF this confidence that support would be forthcoming. Currently, an Australian firm is providing the catering support for the United Nations' peacekeeping operation in Somalia. Civil contractors similarly helped to sustain the ADF's communications contribution to the UN-led Cambodian peace process. Indeed, a civil contribution appears likely to become an increasingly important element in Australia's support for the UN's new peacekeeping agenda, whether they be police, electoral officials or contractor support.

Experience among Western nations overseas also suggests that, despite some early hesitations, civilian support has become an integral part of contingency planning well into the particular area of operations.

British defence has had considerable experience in the 'market testing' and commercialisation of support. Inevitably, there were initial concerns about whether that support would be as secure and reliable as desired and how it would compare with the disciplined military alternative. The following examples suggest that, while combat tasks will generally remain a military

function, civilian support is moving closer and closer to the battlefield in providing support services.

The Ballistic Missile Early Warning System at RAF Fylingdales forms part of the early warning network operated jointly by the UK and the United States. Since 1964 the installation has depended on civil support across a comprehensive range of site activities. The radars have just been modernised to phase arrays. Civil support now covers everything up to delivery of on-screen signals. In this critical and high-value installation warning of attack could be as brief as four minutes.

In Germany, contractors have been engaged since 1975 supporting the British Army on the Rhine in the maintenance of sensitive communications equipment, in a location that had always been subject to combat were hostilities to break out with the Warsaw Pact. Of course, German civil personnel are used widely across potential combat areas.

Persuasive examples of contractors deploying to combat theatres exist within recent British experience. Civilians supported the exercising of Rapier air defence units deployed to the Gulf during Desert Storm, working closely with the British army units there until they formed up in the ground offensive.

Prior to the Iraqi invasion of Kuwait, British contractors were servicing Tornado aircraft sold to Saudi Arabia and running the bases built there by British firms. Those contractors continued to man and support the Saudi air defences during Desert Storm (including radars, air traffic control) and as such were supporting the wider Allied air effort.

During the Falklands war logistic support ships were taken up from the civil market and were fully civil manned during their operations. All logistic re-supply by sea to the Falklands was in civil hands.

Without covering the plethora of instances in which long hours were common, the civil contribution ran round the clock in areas including new weapon development, equipment adaptation, production and supply and maintenance. The British view is simply that the Falklands and Desert Storm campaigns could not have been mounted without this heavy civil contribution. The success of the operations speaks for the effectiveness of that support.

In an ongoing sense the UK now depends on civil contractors to man operational bases abroad. Gibraltar is a forward operational base where all airfield support is contracted out: air traffic control, ground crew etc. On the Falklands, a high readiness operational base, the situation is similar — here contract pilots fly Chinooks in re-supply.

Closer to home, at Diego Garcia the entire base support is provided by a group of 1500 civil contractors. Diego Garcia, it will be remembered, was set up as a forward operating base for operations into South-West Asia, especially to combat any Soviet push towards the Persian Gulf. All services on-base and the readiness of the pre-positioning ships (including regular trial deployments) are carried out under contract. And the capacity to surge to higher levels of activity has always been part of the contractual obligations. During the Gulf War this surge requirement was called upon and met by an additional 350 civil contractors.

Having established that civil support is successfully integrated into the defences of major western nations — at home and abroad, in theatres of war and potential combat zones — it is of interest to examine which functional areas that support lies in.

In the UK, contracts have just been let for training and all maintenance up to and including second line work on a key combat aircraft that is required at a high preparedness state.

In the US it has long been the practice to use civil support on operational bases in duties ranging from flight-line maintenance and ground support, to air traffic control, perimeter security and catering. Contractors will also usually deploy if necessary — such as in Vietnam where contractors manned operational flight lines.

The US navy has drawn on civil manning in its ships also — in niches that offer efficiencies, in a range of vessels up to the carriers.

Ever more demanding technology has made it difficult and costly for military personnel to acquire the skills necessary for modern weapons and sensors support while also fitting into the military posting cycle and career structures. This trend is evident in Australia too. Military personnel planners in the ADF are aware of the complexities facing them in achieving posting cycle objectives. Civil support increasingly will be an efficient complement to attaining a military posting cycle that is more in keeping with today's social and employment expectations.

In summary there is a plurality of practical civil contribution underpinning the operations of kindred forces in the UK and US. The process of contracting-out continues to grow, and with it the trust and respect of those involved. It is clear now, if it wasn't before, that no real combat effort could be sustained without this well integrated commercial base. Reliability of contractor support has not been an issue for these nations. For Australia it is salutary to recognise that the risks encountered in those forces are of a magnitude greater than those implied by our own strategic circumstances.

It has been suggested to us that, because neither the UK nor US governments have ratified the Geneva Convention Protocols discussed earlier, their experiences are largely irrelevant to Australia. This would be to ignore the reality that experience has shown civil support is effective, efficient, and can be applied judiciously without harm to contractors in situations of greater combat intensity than that envisaged in Australia's strategic planning. It is assuming too much to argue that, because these Protocols have not been embraced by governments, there has not been measured judgment on the balance of risk, cost and return.

Apart from the differences in threat prospects for Australia, the importance of continuing civil life and the much vaguer distinction between the importance of civil and military targets underscores the value of proceeding with greater integration than hitherto considered.

There will, of course, always be particular areas of the ADF that demand high levels of confidence in the availability of certain types of combat support. While the transferring of those functions to Regular force elements is the simplest alternative in such circumstances, there are a range of other options which can be used to retain the substantial support capacity of the civilian population and infrastructure. To the extent that greater confidence is sought, these other options should be embraced. They include special contract clauses, designation of employees as defence civilians (thus bringing them within the military command chain) and the use of Reserves or the conferring of Reserve status.

As an example, it has been suggested to us that on-base civil support would not be as cost-effective as the military alternative in 'war', because military support personnel could be turned to perimeter guard duty for part of their day. That seems to us a factor that requires the sort of innovative treatment called for by the Minister in introducing the CSP (see the Minister's words later). The difference could be overcome by laying down structures that enabled the on-base civil support to make the transition to some basic military status during 'preparation' time. Such a structure is available now in the RAAF General Reserve, for example, which provides a minimal cost structure for personnel to be given basic military skills and to be called upon should circumstances warrant. And it provides another valuable integrating thread.

Maximising Industry's Potential and Strategic Policy

If the CSP process is to work effectively, it is essential that the development of proposals seek, within acceptable operational boundaries, to make the civil support opportunities attractive to industry. The IDC on the Wrigley Review recommended that, generally, aircraft maintenance be considered for

commercialisation at intermediate level and depot level. For the F-111's maintenance, for example, it observed that:

> commercial support should not be arranged on a workshop by workshop basis because the existing maintenance structure is most unlikely to provide the basis for optimal efficiency of a contractor's operation. A contract should be negotiated specifying broad performance criteria, specified maintenance requirements and stipulated aircraft availability. This approach offers the greatest potential for savings. *(Inter-Departmental Committee Review of the Wrigley Report*, Working Group No. 5, Defence Aircraft Maintenance Support, Final Report, Canberra, February 1991, para 61).

The case study of how the CSP process had progressed in relation to F-111 maintenance suggests, however, that this has not always been the case. The foundation document is the report of the IDC Working Group No. 5, *Defence Aircraft Maintenance Support*, 21 February 1991.

In that report, the IDC set out explicitly its findings in relation to F-111 maintenance. It noted that, at that time, maintenance for Australia's 22 F-111 aircraft was carried out by an establishment of 1170 RAAF personnel and 105 civilians. In addition some 700 were employed on base support at Amberley. After an analysis pointing to some complexities peculiar to the F-111, the IDC recommended that:

* RFTs be issued for all levels of maintenance below operational (an establishment of 1015 positions, leaving 240 in two operational maintenance squadrons); and

* base support at Amberley be rationalised.

This result was caveatted with a proviso covering 'other' needs, namely that sufficient resources be provided for other operational requirements in accordance with strategic guidance. But it is clear that this caveat envisaged only modest needs in comparison with the establishment of over 1100 positions. The IDC also challenged directly the RAAF notion of manpower required for 'technical mastery', noting it was 'neither an appropriate end in itself nor of any military value'.

Subsequently, in May 1992, the RAAF released its assessment of the activity sponsorship of the 'deeper maintenance' of the F-111. The term 'deeper maintenance' was developed to reflect a reorganisation of the whole maintenance structure of the F-111 — essentially moving to two levels (operational and deeper) from the three level structure (operational, intermediate and depot).

The RAAF report is comprehensive and influenced by two key strategic and operational judgments. The first stems from the concept of 'manpower required

in uniform' (MRU). MRU is generated by a number of factors[1] but chiefly it is concerned with expanding upon the 'other' operational needs that the IDC caveatted its findings with. Second, in calculating MRU for the F-111, the RAAF assumed that:

a. operations would occur from two geographically separated areas which required the aircraft to deploy from their base at Amberley, concurrently; and

b. all 22 aircraft would be required to be 'on-line' and operating concurrently.

The RAAF noted that these demands are generated by guidance in the 'operational readiness directives'. It further noted that the above assumes the 'worst case' scenario. The reasons for making these judgments were not elaborated upon.

In consequence, the 'Statement of Requirement' that was issued covered only a modest portion of the F-111 deeper maintenance, and was arranged in a fragmented, work-oriented way, with six separate SORs covering :

* airframe accessories,

* electrical equipment,

* general instrumentation,

* electroplating,

* metal machining, and

* carpentry and wood machining.

The justification for this fragmentation is directly traceable to the strategic interpretations outlined above.

The detailed RAAF appraisal of MRU was dominated by the 'contingency manpower requirement' (CMR). This exercise judged that, of the some 1100 total positions, around 500 were required to be held for CMR and therefore 'parked' (sic) against the possibility of being required to relieve support deployed in the operations outlined above.

The outcome has been that the CSP competition for F-111 maintenance was limited to testing 353 positions. RAAF put forward a preferred in-house option that was costed on the basis of much fewer people — 190 direct personnel (107

[1] Manpower Required in Uniform is the sum of an assessment of uniformed manpower for contingencies (CMR), military specialists (covering a variety of functions, including 'technical mastery') and structural overlay (determined by manpower hierarchies and structures).

military, 83 civilian). How this efficiency has been achieved is still not completely clear, particularly how the MRU component has been taken into account.

This in-house option was accepted.

Setting aside for the moment the strategic justification for the RAAF's approach, it is clear that the results of the evaluation process fall far short of the scope for civil support identified by the IDC. The scale of the work offered meant that giving industry broad performance such as aircraft availability for industry to aim at was rendered infeasible. So a key element recommended by the IDC for enticing innovative and efficient response from industry was missing.

Thus whilst the in-house result might appear to offer some efficiency gains compared to previous RAAF practices, it falls well short of the agenda set by Defence Minister Robert Ray in tabling the 1991 *Force Structure Review*. He noted that:

> ... demanding is the task of deciding what we can do less of, or to find better ways of doing things so that we can release resources for new projects and activities. In Defence, as in all areas of Government, there is always a need to make more effective use of resources. It is only through being more innovative and creative in its approach to resource management that Defence will be able to acquire more surface combatants, improve army mobility, and acquire early and control aircraft. (*Defence into the Twenty First Century,* Ministerial Statement by the Minister for Defence, 30 May, 1991)

Clearly, if the CSP process is to realise its full potential, there is a need for:

(i) explicit guidance on strategic parameters such as warning and preparation time, the nature of conflicts in the defence of Australia; and

(ii) earlier and closer industry involvement in the definition of what options are attractive and likely to produce greater efficiencies for both defence and industry.

This is not to suggest that the consultative processes with industry now in place have not been valuable, nor that program managers should not have the responsibility for initiating proposals or carrying them through to fruition. But first-hand input by industry on industry's capabilities, on the thresholds that make CSP packages attractive, and on the potential linkages between CSP proposals across like equipments, should add to that value. This may well lead to a broadening of candidate activities, to everybody's gain, eg instead of letting contracts by each aircraft type, multiple aircraft support activities might be expected to emerge as industry-preferred parcels.

Again, whilst recognising the complexities of Defence decision-making, there would be considerable advantages in industry being encouraged to work with

Defence daily and in considerable detail on how transition to specific preparedness targets in realistic preparation times might be managed, and the broader options developed at the margin across a range of related activities (eg vehicles, aircraft, radars). Defence might also consider the involvement, by way of working groups or perhaps independent consultants, of industry representatives to refine CSP strategy once the Defence CSP policy is broadened. The British precedent of bringing in a leading industrial figure to share the responsibility with Defence for maximising the program's scope and effectiveness underlines the advantages of such an approach.

These conclusions may not appear on the surface to be strictly strategic in origin. They do, however, reflect the new emphasis in strategic policy on making Australia's industrial capabilities the 'fourth arm' of Australia's defence. Apart from emphasising the role of civilian industry in the repair, maintenance and adaptation and through life support of weapons systems, the *Strategic Review 1993* identifies a range of capabilities that Defence is looking for from industry. In particular, it notes:

> Logistic Support, including transport and supply of consumables — Defence will make maximum use of facilities and services already available in the community. In particular, Defence will be looking for increased industry support in the north of Australia. *(The Strategic Review 1993*, p. 73)

Balancing Operational Needs

The third important factor is the extent to which operational considerations, which were admitted as a caveat on CSP activities by the IDC on the Wrigley Review, are impacting on the program's implementation. In this respect, there are clearly a number of force element groups that may need to be at a relatively high state of readiness and hence may justify a level of in-house support capability to ready and support them at short notice. These could be platforms required for the performance of current tasks, or those which might need to generate higher rates of effort quickly should strategic circumstances begin to deteriorate at some time in the future.

Clearly, strategic intelligence capabilities are required to be well prepared. And a case can be made for maritime surveillance and patrol to be able to respond sufficiently to enable further definition to be put on intelligence information. In addition, the Government has required some elements of the ADF to be on specific notice to move for operations. These include the counter terrorist force and elements of the Operational Deployment Force. As these may be required to generate higher rates of effort within short time frames, some assurance of back-up personnel within the current standing forces is clearly warranted. Similarly, some force elements are engaged on peacetime duties which might quickly

merge with military effort in the event of deteriorating strategic circumstances, eg the patrol craft and transport aircraft.

The example of the F-111 suggests, however, that these priorities are being applied across a much wider part of the force structure. In the context of a 'no threat' environment, strategic policy would suggest that conflict requiring concurrent and sustained forward strike operations is a remote and extreme prospect and one for which Australia could expect several years of warning and preparation. However, it would appear that at least some of the potential resource efficiencies under CSP arrangements may be being diverted into unnecessary preparedness under the rubric of MRU.

Within the MRU calculation is a reservoir of personnel required within the force-in-being to relieve operational personnel once their tour of duty in a 'war' has reached some predetermined time. Of necessity this involves a substantial cost, with frontline manpower resources having to be multiplied by some factor determined by the rotation and preparation times.

The difficulties with this approach are threefold. First, care has to be taken that this concept is only used where there is a demonstrable need for that sustainability element to be available within a quite short time-frame. Second, to the extent that the MRU concept is used to justify the retention of additional capability that might be lost or civilianised under the CSP process, that trade-off needs to be clearly identified and justified against overall strategic priorities. It may well be an important factor in the size (and hence attractiveness) of the package that can be let to industry. Third, to the extent that civil support is employed in the ADF the need for a military reservoir is reduced — the community becomes the expansion base.

For the majority of the ADF, the Government (as distinct from the ADF) has not specifically identified a preparedness condition that would require a manpower multiplier to be earmarked now. This is not to say that other units would not be able to sustain operations at short notice.

But for most of the ADF the peacetime task will be to train with a view to developing those skills of priority for the defence of Australia. The forces deployed to the north have a particular opportunity to develop within the environment of most relevance to their operating focus. But that does not require high operational preparedness per se.

No strategic change has stimulated the move of forces to the north. The policy intent has been to provide first hand training and development opportunities, at substantial enough cost without another, unwarranted preparedness overlay. Some operational capability would and should flow from this training, to

different extents for different units, but preparedness should not be an overriding objective of that activity in current strategic circumstances.

Because of the resource implications of specifying operational preparedness states for a unit in peacetime, it has been customary for government to consider such proposals (eg the ODF, counter-terrorist forces). This new concept of MRU adds a further and heavy cost to any preparedness initiative. So there is now even more reason for any specific operational preparedness requirement on a unit, over and above the modest few now so designated by Government, to be considered with the utmost policy discernment, on a case-by-case basis in the light of the strategic reasons for change and the resources implied.

In this context, there has been an important shift in Australia's strategic policy in recent years. Whereas the expansion of the ADF has traditionally been seen in response to warning of higher levels of conflict, *Australia's Strategic Planning in the 1990s* introduced two new concepts. It noted that:

> The ADF will need to supplement its skills and expand its manpower by drawing on the broader civilian community, on which the ADF's expansion ultimately depends. Initially this may be a matter of simply filling out existing units and capabilities. The ADF must also (emphasis added) be able to expand its capabilities in a timely way against warning of more substantial conflict. (*Australia's Strategic Planning in the 1990s*, Defence Publications, 113/1992, p. 39)

ASP 90 went on to note that:

> ... it will be important during the next decade that the ADF focus its capability development — including the integration of the Reserves — on enhancing its ability to operate jointly in low-level and escalated low-level conflict...(*ASP 90*, p. 39)

This new emphasis on the ability to generate a selective 'surge' capability for short warning conflict from outside the force-in-being is reflected in a number of initiatives. These include the identification of specific roles for Reserve Forces to allow them to become more operationally effective within shorter time-frames and the establishment of the Ready Reserve Force whose preparedness states well equip those force elements to generate sustainability for the force-in-being. If not carefully applied only to priority strategic roles — in which case, the MRU meets specifically identified needs — wider application of the MRU concept runs counter to Australia's strategic priorities and other important elements of defence planning endorsed by Government.

THE WAY AHEAD

In undertaking a specific review such as this, there is always a danger of imbuing the subject (in this case the CSP process) with a significance out of proportion to its place in the overall policy context. The CSP is certainly not a

panacea for all ills. There will always be, as the CSP process recognises, substantial functions that can only be accomplished through Regular forces, comprehensive military training and direct command arrangements.

At the same time, the CSP is much more than a simple tool for cutting costs and improving efficiency in particular areas. It is a key element in the ADF's ability to enhance its available combat capability by shifting its own resources (manpower and equipment) from the 'tail' to the 'teeth'. It also represents a fundamentally new element in Australia's approach to defence self-reliance.

As the Strategic Review 1993 observed:

> The defence of Australia is a national responsibility. Therefore a key priority is the harnessing of our national resources — military and civilian — to achieve the most cost-effective effort. Australia's history shows the importance of an integrated national effort to successful military endeavour. Defence depends critically on a wide range of services provided by the commercial sector. We have the opportunity with industry restructuring in Australia to enhance our capacity for national defence. (*Strategic Review 1993*, December 1993, para. 6.1)

The purpose of this study has been to step back from the nitty gritty of CSP implementation and to evaluate its performance, not so much in terms of dollars saved, but in terms of how well it is consistent with, and realising its potential in relation to, other aspects of defence policy.

While some valuable gains have been made, the study has concluded that further progress will be hindered if the narrow planning parameters currently being applied are maintained. The key to opening up the full potential of the CSP is a less restrictive but more strategically sound interpretation of the boundary between core and non-core functions. Key principles which need to be accepted into CSP planning in this respect are:

* the rather arbitrary distinction between the area of operations or combat zone in the north and other areas of Australia needs to be broken down. It has little practical meaning in the context of commercial support for defence in short warning conflict;

* close civil-military interaction will be integral to effective military operations in the defence of Australia. The ADF and the civil community will draw on the same infrastructure, supply links and, frequently, support services throughout Australia. Clear distinctions between civil and military locations and functions will frequently be difficult to draw, whether in the north or south;

* given the lack of a foreseeable threat to Australia and the nature of priority contingencies, the Laws of Armed Conflict do not preclude significant civil support for defence, including in the north. In most circumstances, the risk

to civilians supporting ADF operations would be little different to that of the northern population as a whole;

* there is considerable potential for the use of civil support on forward operating bases in the north. This is an area in which there will be a large and sustained concentration of ADF activity, but also where the military and civil communities are closely co-located. Indeed, many of those bases could not realistically be maintained without it, especially if activated concurrently;

* there are no strategic impediments to the use of civil support on operational or other bases elsewhere in Australia. The high readiness status required by government of a relatively few units may warrant their direct support by the ADF, but selectively;

* the ADF will need to retain first line support capabilities in key areas:

  - for ground forces, to support tactical deployments away from bases to remote areas of the north;

  - for forward Air Force deployments where civil support is not achievable; and

  - for combatant vessels deployed at a distance from Australian ports;

* there may also be grounds for retaining a limited first line support capacity for force elements that may be deployed overseas at short notice. However, civil support contracts could include provision for the extension of support into this area;

* for the remainder of the ADF, all levels of maintenance and support capabilities should, where practical, be opened up to the civil sector. This would encourage the development of wider national capabilities to support the ADF, a better match with industry priorities, and would provide the basis for enhanced sustainability in a more serious conflict;

* at the same time, it may be unrealistic to expect that Australian industry is sufficiently well developed now to be able to follow some overseas countries' example in providing support for first line maintenance at short notice in a whole range of areas. Where these deficiencies exist, the current priority should be to foster that national support base into second and third line support and to make the most effective use of the available northern infrastructure; and

* the process outlined above would have the important additional advantage of alleviating the pressure from increasing technology demands on defence training and personnel management.

Operational concerns that civil support may not be sufficiently reliable in a conflict and that the ADF must retain a significant surge capability within the force-in-being should not be overstated:

* the nature of the conflicts on which Australia bases its planning, the increasingly close integration of military and civil capabilities in the defence of northern Australia, the likely continuity of many aspects of civil life there, and the generally limited risk to support personnel in most situations, should give considerable confidence that effective operations would not be prejudiced;

* overseas experience also supports reliance on civil support in a conflict, short of situations of direct tactical engagement. Should there be areas of particular sensitivity, or where full command arrangements are essential, options exist, including special contract provisions, for bringing civilians under command and the more extensive use of Reserve personnel;

* to the extent that concepts such as MRU are implemented, they must be seen as complementary to the CSP, rather than competitive. Where manpower and resources are restricted due to MRU factors, these should be directed to combat rather than combat support elements, unless a case for additional Regular Force preparedness in that area is developed against changed strategic circumstances. This would be in accordance with the policy in the 1987 *White Paper* and the *Force Structure Review* 1991 to make more effective, but often more task specific, use of the Reserves;

* designating Contingent Manpower Requirements for any unit has substantial resource implications and should be a highly selective judgment based on specific strategic focus; and

* given that there will only be a few areas of capability likely to have to generate high activity levels in peacetime or with relatively little notice, sustainability should generally be able to be provided by either Reserve forces brought to full readiness, or by the civil community;

The effective implementation of these principles demands, however, more comprehensive and integrated policy guidance to assist program managers. The potential resource savings involved, if CSP is fully implemented, certainly justify the program being given the same direction and accountability that applies in other areas of the defence portfolio.

In particular, the overall policy approach to CSP needs to change from one primarily focused on resource efficiency, (ie Regular forces would be preferred if the defence budget allowed) to one which emphasises the CSP as an important tool for maximising Australia's combat potential in war.

To achieve this, there is a need to:

* establish clearly defined objectives as to what CSP should be seeking to achieve right through into combat support. That is, there needs to be a quite specific identification of the wider roles that national resources should play and to what extent;

* prepare a comprehensive policy overview document, set against the above objectives, to guide program managers. This should not only bring together and explain the various strategic, operational and legal criteria impacting on the CSP, but it should also provide guidance on the balances between them;

* introduce procedures whereby CSP proposals/programs can be reviewed against these guidelines. There would be benefits in an arrangement which encouraged widening of packages for industry whereby related proposals from different program areas could be aggregated; and

* develop enhanced consultative and working arrangements with industry to promote greater understanding of each others' interests and confidence in the long-term relationship.

The CSP process would, of course, need to be amended to reflect these developments in both policy and procedures.

These changes, designed to bring the substance and procedures of the CSP process better into line with Australia's strategic priorities and other aspects of defence planning, offer considerable scope for future progress. Ultimately, however, their success will depend on a willingness to embrace wider national support as an important multiplier in the quest for self-reliance.

ATTACHMENT A

OUTLINE OF CONSULTANCY PROPOSAL

THE APPLICABILITY OF THE COMMERCIAL SUPPORT PROGRAM TO CORE ACTIVITIES WITHIN THE ADF

Background

1. In its inquiry into defence procurement, and as noted in its Issues Paper of September 1993, the Industry Commission is looking at a number of issues including:-

> 'the costs and benefits of existing programs such as Australian Industry Involvement (AII), Defence Offsets and the Commercial Support Program (CSP).'

2. In addressing this reference, the Commission is aware that practical interpretation of defence policy is important. The concept of a 'self reliant' defence of Australia, developed within resource limits, provides the policy basis for addressing the above issue. The CSP is an example of measures developed within this policy framework.

3. Under the CSP program, all 'non-core' support activities are being subjected to market-testing over a period by the Department of Defence so that the most cost effective in-house or commercial arrangement can be put in place. Potentially the program greatly increases the access of industry to the supply of goods and services to the ADF. Evaluation of competing options is undertaken within the Defence establishment.

4. Combat and combat related activities are regarded as core. Activities not part of the organisational core and not integral to the sustainment of the core are designated non-core activities.

5. Information provided by Defence to the Industry Commission indicates that the program over the past 2 years has led to savings in the Defence vote of some $70m. Further savings are being pursued over a range of non-core activities.

6. Recognising the importance of the CSP to industry and to Defence, the significant savings within the defence vote itself, as well as freeing manpower to improve the 'teeth-to-tail' ratio within the ADF, the Industry Commission wishes to examine whether there is greater scope for industry involvement beyond non-core activities. It notes that many of the operational support skills currently excluded from CSP are the same skills that industry will frequently

acquire as part of its involvement in manufacture, adaptation and support of defence force equipments and weapon systems.

7. The Industry Commission has been advised that overseas practice, including that followed by the US and the UK, involves civilian contractors in combat related support activities on operational bases which in Australian terms would be categorised as core activities.

Terms of Reference

8. The study and report are to:—

a. address how the policy of self reliance can be further translated into priorities that would enhance industry's contribution to defence and whether there are factors, consistent with strategic and broader defence policy considerations, that would suggest that civilian contractors under a CSP could be used effectively and efficiently to support combat and combat related activities. These considerations should take particular account of Australia's strategic circumstances including the likely levels of threat, warning times and lead times, geographic circumstances and the fact that contractor support would be provided on Australian soil;

b. assess the practices of the US and the UK military who, it is understood, employ civilians on operational bases in support of combat related activities, and determine whether their experiences and the special conditions (including employment related conditions) that may apply have relevance to practices being adopted by the ADF; determine the extent of the civilian or contractor involvement on these US and UK operational bases and the extent to which the parent service considers the civilianisation meets the essential standards of an operating base, ie. standards that would be expected if military personnel were used in their place.

9. Subject to the findings of the above study and as a practical test of these findings, a follow-on study may be undertaken to determine the factors that have a bearing on whether and to what extent consideration should be given to the civilianisation of an operational base including operational support activities under the Commercial Support Program. This follow-on study, which would be undertaken only after consultation with the Industry Commission (which, in turn, would consult with the Department of Defence), would be to examine, assess and make recommendations on such matters as:-

a. the extent to which strategic and other considerations, including military, financial, legal, manpower, command and control as well as

broader Government policy considerations and the experiences of other countries, would support the civilianisation of operational bases including operational support activities under the CSP. The operational support activities to be examined should include, but not be limited to, such activities as the base repair and maintenance of the operational equipment on base; the preparation of equipment for training or combat operations, including the test, inspection, armament, fuelling and all such activities necessary to ensure the readiness criteria are met for the ADF's intended mission; the maintenance of the support facilities in a satisfactory condition for operational use including maintenance and inspection of command and control systems, support equipments and spares holdings, and as necessary security of the support area; and,

b. any other matters considered relevant as a result of the findings of the initial study detailed above.

10. It is to be noted that the range of matters outlined in paragraph 9(a) above for any follow-on study provide a focus for the matters to be considered in the initial study reviewing the practices of the US and UK military.

Timetable

11. The initial report is to be submitted to the Industry Commission no later than Friday 6 May 1994. This timing is dictated by the need for the Industry Commission to be able to draw on the major findings of the study and to reflect these in its draft report of the inquiry which is scheduled for release in late-May 1994.

12. The Industry Commission accepts that some matters in the initial report on the applicability of the CSP to core activities within the ADF may highlight the desirability of further investigations including whether to proceed with a case study of an operational base. A decision on this will be made at the time the initial study is completed in consultation with Professor Paul Dibb and the Department of Defence. If further work is to proceed, it would need to be submitted to the Industry Commission no later than Friday 1 July 1994.

13. A visit to the UK and to the USA (and, possibly, Canada) by Commissioners handling the inquiry into Defence Procurement is tentatively planned for the week of 18 April 1994. This visit will address, inter alia, matters of the kind covered by this study. Commissioners would be seeking to obtain first hand impressions of the success or otherwise of the UK and US military forces having a Commercial Support Program approach applied to operational bases. Because of the timing of this visit, the Commissioners would want to have a verbal briefing on the progress of the study early in the week of 11 April

1994 and to be briefed on the details of the programs undertaken by the UK and US Defence having relevance to this study.

Personnel Assigned to the Study

14. The initial (and any follow-on) study is to be oversighted by Professor Paul Dibb and is to be submitted with a 'foreword' from Professor Paul Dibb expressing his judgments on the issues raised in the report. It is noted that Professor Paul Dibb has nominated Dr Michael Gilligan, and Dr Stewart Woodman, who are senior members on his staff, to carry out the study. These arrangements are suitable to the Industry Commission.

28 February 1994

ATTACHMENT B

PERSONS CONSULTED

A number of people were generous with their time in providing advice and material essential for this study. They are, roughly in order of consultation:

Mr Mike McNamara, Principal Adviser Logistics Policy

Mr Stephen Brown, Assistant Secretary, Legal

Group Captain Dick Hedges, Director RAAF Commercial Support

Squadron Leader Col Hill, RAAF Commercial Support

Squadron Leader Steve Ranson, RAAF Program Analysis

Mr Phil Liddicoat, Assistant Secretary Program Analysis

Captain Graham MacKinnell RAN, HQADF

Mr Don Wood, Counsellor A&L, Australian Embassy, Washington

Mr Warren Wood, Counsellor A&L, Australian High Commission, London

Mr David Perkins, Group Finance Director, Serco Group, UK

Mr Richard Nicholls, Director of the Serco Institute, UK

Mr Ian Downie, Managing Director, Serco Operations

APPENDIX G: QUANTIFYING THE ECONOMY-WIDE IMPACTS OF PROCUREMENT

ORANI projections of the effects of defence procurement indicated negligible changes in real GDP in three different scenarios. At the industry level, switches in expenditure would have relatively significant impacts.

The impact of defence procurement on the economy may be measured in a number of different ways. One is to use the proportion of sales of each industry purchased by Defence; this gives a direct estimate of the number of jobs and output attributable to defence procurement. However, a 'partial' approach such as this implies that there would be no alternative uses of these resources if defence procurement were eliminated.

General equilibrium analysis, on the other hand, is based on the assumption that various activities compete for resources which have alternative uses within the economy. Therefore, in measuring the impact of a particular activity on the economy, account is taken of the potential to divert resources to other activities. Several options could be used to estimate the impact of defence procurement on the economy within this framework.

In response to the terms of reference, the ORANI general equilibrium model of the Australian economy (see Box G1) has been used to investigate the effects of defence procurement on the economy. The three scenarios modelled are hypothetical in nature, thereby serving an illustrative rather than a predictive purpose. They are:

- spending more on aircraft and less on ships;
- more capital expenditure and less personnel expenditure; and
- buying more in Australia.

None of the scenarios are suggestive of current policy nor are they proposed as policy alternatives.

Box G1: **The ORANI model**

The ORANI model is a general equilibrium model of the Australian economy which has been used over the past two decades for policy projections. More details on ORANI are presented in Appendix I.

ORANI projections may depict either short-run or long-run results. Short-run results refer to a period in which it has been possible to reallocate labour and material inputs, but in which capital stocks are still fixed. Short-run results would generally apply about two years after the policy change. Long-run results refer to a period during which it has been possible to adjust industry capital stocks in response to changes in industry profitability. The path of adjustment is not traced by the model.

In the short run, unemployment is allowed to vary while nominal wages are held constant, reflecting the outcomes of enterprise bargaining in which nominal wage increases would be granted only in response to productivity increases. In the government sector, the real borrowing requirement (current and capital expenditure minus revenue in real terms) is not constrained, but is allowed to vary in response to induced changes in activity.

It is assumed that in the long run, there is a constraint on employment, in that real and nominal wages vary so that growth in employment in one sector of the economy, such as defence, is ultimately at the expense of growth in employment in other sectors (see Box G2). This does not necessarily mean that actual wages would fall, however. As ORANI gives comparative static projections of policy changes, it shows only how wage levels would differ from those that would have occurred in the absence of the policy change.

In the long-run ORANI environment, there is also a government borrowing constraint. This means that any policy decision must be fully funded within the depicted point of time.

The results generated by ORANI indicate how different the economy would look at some time in the future compared with its alternative position without the policy change. They are presented as percentage changes between these two positions.

Several modifications have been made to the ORANI model for this inquiry (also see Box G2). The standard database contains input–output details based on the Input–Output Commodity Classification (IOCC) tables published by ABS (1990) for 1986-87. However, there have been substantial changes to the pattern of Defence expenditure since 1986-87, so the input structure of Defence has been updated to 1992-93, based on published data and data collected from the Department of Defence and firms.

To put the results in perspective, it is useful to note that Defence accounted for 9.5 per cent of recurrent Commonwealth government spending, and for 2.4 per cent of GDP in 1992-93. Consequently, changes in the pattern of Defence expenditure could have significant impacts at least on individual industries, if not on the economy as a whole.

Box G2: **Using ORANI in this inquiry**

Each of the three scenarios is depicted in a long-run environment in which there is assumed to be a constraint on employment. Even in times of high unemployment, there may be a shortage of skilled labour. In such circumstances, a stimulus to one sector may draw skilled labour away from other industries or from overseas, and may have little impact on the national unemployment rate. According to the Department of Defence:

> local defence spending provides very few opportunities for non-skilled workers and draws disproportionately on the very limited resources available nationally for highly specialised work. (Sub. 29, p. 1)

Other participants pointed out that additional skilled resources could be trained over the long period during which major defence procurements are made. Further, it was said there is a large number of unemployed graduate engineers. However, according to the model, given a return to lower levels of unemployment, stimulation of growth in a particular sector of the economy, such as defence, would ultimately be at the expense of growth in employment in other sectors.

In addition, a scenario in which Defence buys more in Australia is also depicted in a short-run environment.

The changes associated with each scenario are simulated as a change in unit input requirements per unit output of Defence services (units are measured in dollars). The proportion of each input that is attributable to domestic and imported sources respectively is unchanged in the first two scenarios.

What is assumed about exports in ORANI, can make some difference to industry-specific results. For most defence-related equipment, exports are presumed to remain constant in real terms in response to changes in policy. This assumption applies to exports of aircraft and ships and boats. There is evidence, however, that electronics has become an increasingly export-oriented industry, as exports have grown by over 60 per cent since 1990-91 and now exceed $1100 million per annum. Most electronics exports are for civilian purposes. This means that while the direct impact of Defence policy on exports of electronics goods is likely to be negligible, the indirect impact through the real exchange rate effect could be noticeable. Therefore, exports of electronics are free to vary in response to price changes in the ORANI projections. The export demand elasticity for electronics is set at –5.0 in the short run and –10.0 in the long run.

ORANI does not capture all possible economic gains. It is assumed within the model that unit input requirements remain constant as the scale of production increases, so that the benefits of greater capacity utilisation are not captured within the model.

Further, the Commission's projections do not incorporate the impact of possible productivity gains arising from technology advances that may be associated with a particular scenario. However, ORANI can be used to investigate the effects of technological gains in the main industries under reference, namely ships and boats, aircraft and electronics. Each one per cent increase in productivity in these three industries is projected to increase real GDP in the long run by 0.02 per cent ($80 million) and to improve the balance of trade by $20 million. However, these projections do not capture the costs incurred in acquiring the productivity improvements.

Some idea of which industries would be most affected by possible changes in defence expenditure can be gathered from Table G1. The first column in the table provides a measure of the importance of key industries in total defence procurement, while the second column provides a measure of the weight of defence contracts in the overall activity of these industries.

Table G1: **Major suppliers of goods to Defence, 1992-93[a]**

Industry	*Sales to Defence % of total defence procurement[b]*	*Sales to Defence as % of total turnover of supplying industry[c]*
Ships and boats	25.3[d]	65.0
Construction	8.0	1.0
Aircraft	5.5	8.0
Business services nec	5.6	0.7
Electronic equipment	4.8	3.2
Petroleum, coal products	4.4	1.3
Electrical	1.8	0.5
Chemical products nec	2.7	5.6
Other	41.9	0.3

a Engineering is excluded as this activity is spread over a number of industries in ORANI, rather than being depicted by a single industry. The engineering component of each industry is not identifiable separately.

b Defence expenditure on materials and capital goods, ie excluding Defence personnel.

c Based on value of turnover for 1991-92 (ABS 1994).

d This 25.3 per cent includes inputs from other industries as follows: Electronic equipment (6.5), Electrical (4.1) and Business services nec (3.0).

Sources: ORANI database, updated using 1992-93 Defence spending from Defence Annual Reports, Budget Papers, ABS 1990, ABS 1994.

Industry-level sales do not give an indication of how important defence contracts are to particular firms. However, such an indication has been gathered from the Commission survey reported in Appendix H and Chapter 9.

Scenario 1: spending more on aircraft and less on ships

Defence expenditure tends to be 'lumpy'. Spending on particular capital items such as aircraft may be a large component of defence expenditure for several years before a phase in which another project, such as upgrading of the naval fleet, dominates. Different items may require differing amounts of labour for a given level of expenditure; also, differing levels of imports may be required.

Therefore, the dominance of a particular project in defence expenditure at a particular time may have some effect on levels of employment and output in some key input industries and on the whole economy.

The ORANI model was used to evaluate the impact of a switch in defence purchases from ships and boats to aircraft. This was based on the thrust of Defence planning to increase expenditure on aircraft towards the end of the decade (see *Defence New Major Capital Equipment Proposals 1994 – 1998*). It was assumed that spending on aircraft increased by 160 per cent from a relatively low base ($240 million), with a decrease in spending on ships and boats of 60 per cent from a relatively high base ($1136 million), with small assumed changes in other categories.

Some components of defence-related ships and boats are imported but final assembly is entirely domestic. Overall, defence-related ships and boats at present are less import-intensive than Aircraft. Therefore, a switch in Defence purchases from ships and boats to aircraft would increase Defence's net imports, with an increase in net imports to the economy in the first instance. However, the associated easing of demands made on domestic industries would lead to price declines and a real exchange rate depreciation. This indirect effect would act to reduce imports and increase exports, tending to offset the direct effect of the expenditure switch on the balance of trade. Therefore, the overall effect on the balance of trade would be smaller than the initial increase in net imports in defence expenditure.

In the ORANI projection, imports would rise by 0.5 per cent, reflecting the direct effect of the expenditure switch. Prices throughout the economy would fall due to a reduction in the demands placed on domestic resources. Due to this real exchange rate depreciation, exports would rise slightly, by 0.2 per cent (Table G2). Overall, there is projected to be a deterioration in the balance of trade of $215 million (1992-93 dollars). This is less than the direct increase in net defence imports of $380 million (1992-93 dollars).

Table G2: **Macroeconomic effects of spending more on aircraft and less on ships (per cent change[a])**

Balance of trade (1992-93 $ million)	-215	Real GDP	..
Real consumption	-0.1	CPI	-0.1
Export volume	0.2	Real wage before tax	-0.1
Import volume	0.5		

a Excepting Balance of trade. .. less than + or - 0.05 per cent.
Source: ORANI projections.

There would be negligible changes in real GDP (a decline of 0.04 per cent or $160 million) and real consumption (a decline of 0.1 per cent).

There would be a decrease in unit profits stemming from the decrease in demand for ships and boats industry in this scenario, so capital stocks would tend not to be replaced as they depreciate (Table G3). Conversely, in the aircraft industry where there would be a marked increase in demand, capital stocks would be built up. This reallocation of capital would facilitate changes in supply to accommodate changes in demand.

Table G3: **Industry-specific impacts of spending more on aircraft and less on ships (per cent change)**

Industry	*Prices*	*Output*	*Demand for labour*	*Capital stocks*	*Change in imports of output*
Electronic equipment	-0.1	-1.8	-1.8	-1.9	-0.7
Electrical	-0.1	-0.6	-0.6	-0.6	-0.8
Aircraft	-0.1	14.0	14.0	13.9	12.8
Ships and boats	-0.1	-25.4	-16.2	-25.4	..

.. less than + or - 0.05 per cent.
Source: ORANI projections.

The defence component of ships and boats is reliant on electronic and electrical inputs in production. The small projected decreases in activity in the electronics and electrical industries are largely a consequence of reduced production of ships and boats.

In summary, the projected effects of the possible switch in Defence expenditure from ships and boats to aircraft illustrate that although there might be significant effects on some industries, the economy-wide effects would be small (Table G2).

Scenario 2: more capital expenditure and less personnel expenditure

Defence expenditure on capital equipment currently accounts for approximately 25 per cent of recurrent Defence spending, having increased from 15 per cent a decade or so ago (see Chapter 2).

Table G4: **Summary of more capital expenditure and less personnel expenditure**

	% of total expenditure 1992-93 database	*% of expenditure in long-run ORANI projection*
Payments to service personnel	48	37
Purchases of goods: domestic	37	44
Purchases of goods: imported	12	15
Purchases of goods: non-competing imports	3	4
Total	**100**	**100**

Source: ORANI update based on Defence Annual Report, Budget Papers.

In this scenario, capital intensity was increased a further 10 percentage points, to reach 35 per cent of total defence spending (an increase of $1000 million), with a corresponding reduction in expenditure on personnel (Table G4). The product composition of the additional capital expenditure is assumed to be the same as currently, while the source composition between domestic and imported goods is also assumed to remain unchanged.

In the scenario, the increase in demand for both domestic and imported defence capital equipment would lead to a real exchange rate depreciation. This explains the induced increase in the volume of exports from those industries in which exports are free to vary. Therefore, the initial movement towards greater capital intensity, which requires a $300 million (1992-93 dollars) increase in net imports, would be offset to some extent by the real exchange rate effect. The deterioration in the balance of trade was a smaller figure of $220 million. Real GDP, however, is projected to remain unchanged.

Table G5: **Long-run macroeconomic effects of more capital expenditure and less personnel expenditure (per cent change[a])**

Balance of trade (1992-93 $ million)	-220	Real GDP	..
Real consumption	..	CPI	-0.1
Export volume	0.3	Real wage before tax	-0.2
Import volume	0.6		

a Excepting Balance of trade. .. less than + or - 0.05 per cent.
Source: ORANI projections.

Of the defence-related industries, the expansion in ships and boats would be greatest (Table G6). The electronics and electrical industries would be stimulated directly through the increase in defence capital expenditure, and indirectly through the increase in purchases of ships and boats.

Table G6: **Long-run industry-specific impacts of more capital expenditure and less personnel expenditure (per cent change)**

Industry	*Prices*	*Output*	*Demand for labour*	*Capital stock*	*Change in imports of output*
Electronic equipment	-0.1	1.8	1.8	1.7	0.7
Electrical	-0.1	0.8	0.8	0.7	1.0
Aircraft	-0.1	1.8	1.9	1.7	1.7
Ships and boats	-0.1	8.8	8.8	8.4	0.1

Source: ORANI projections.

Scenario 3: buying more in Australia

The impacts of defence procurement were also projected in a hypothetical scenario investigating the effects of buying an additional $1 billion of defence-related goods in Australia.

This scenario is not realistic, as there are limits to the procurement of Australian-made goods by Defence. For example, harpoon missiles would be impossible to manufacture in Australia at reasonable cost, but for the purposes of this exercise, it was simply assumed that only those goods designated by ABS as 'Non-competing imports' could not be manufactured in Australia[1]. It was not assumed that Defence purchases would switch back to imported goods as domestic prices rose. Neither real output nor the number of service personnel employed by Defence was assumed to change, although there would be small induced changes in outlays measured in value terms (Table G7).

[1] The 'Non-competing imports' used by Defence essentially reflects spending by Defence personnel while overseas.

Table G7: **Defence expenditure 1992-93**

	% of total expenditure 1992-93 database	*% of expenditure in buying more in Australia scenario*
Payments to service personnel	48	48
Purchases of goods: domestic	37	49
Purchases of goods: imported	12	0
Purchases of goods: non–competing imports	3	3
Total	**100**	**100**

Sources: ORANI database, updated using 1992-93 Defence spending from Defence Annual Reports, Budget Papers, ABS 1990, ABS 1994.

Short-run effects

If Defence purchased more Australian goods, there would be an expected increase in output in those industries where a large proportion of sales are to Defence, excepting defence-related ships and boats, which at present are not import-intensive. In the short run, there would be price increases in key input industries due to a greater squeeze on existing resources. These price and output effects are apparent in the short-run results (Table G8).

Table G8: **Short-run industry-specific effects of buying more in Australia (per cent changes)**

Industry	*Prices*	*Output*	*Demand for labour*	*Unit profits*	*Change in volume of imports*
Electronic equipment	0.6	4.2	5.0	10.3	-2.0
Business services nec	0.2	0.3	0.4	0.8	-2.1
Petroleum, coal products	0.1	0.3	0.3	0.7	-0.5
Electrical	0.3	2.9	3.3	6.7	-3.5
Chemical products nec	0.7	2.7	3.8	7.6	-5.0
Aircraft	0.9	12.2	13.1	27.5	-4.5

Source: ORANI projections.

The price increases shown in Table G8 would be additional premiums induced by the effect of buying more in Australia rather than any initial price premiums attached to domestic purchases. These price increases would be a result of rising costs associated with increased demand for domestic goods. There would be

losses spread thinly over other industries in the economy due to rising input costs.

Table G9: **Short-run sectoral effects of buying more in Australia (per cent changes)**

	Output	*Exports*
Agriculture	..	..
Mining	..	-0.1
Manufacturing	0.5	-0.5
Services	0.1	..

.. less than + or - 0.05 per cent
Source: ORANI projections.

Some industries would be adversely affected. This is because the additional $1 billion of purchases would cause a diversion of resources from other activities. At the sectoral level, this means that fewer goods would be available for export, while a real exchange rate appreciation would reduce the international competitiveness of export-oriented industries (Table G9).

There would be a boost to employment in industries that are heavily reliant on defence procurement in their turnover, while employment opportunities in other industries would decline as they suffered cost increases. Overall, switching $1 billion to purchases of Australian goods is projected to decrease the number of unemployed by 2.5 per cent, with the number of jobs increasing by 16 000 (Table G10).

There would be a decrease in the overall volumes of both exports and imports, with an overall improvement in the balance of trade of $570 million in 1992-93 dollars, smaller than the initial switch of $1 billion. Real GDP is projected to increase by some 0.2 per cent or approximately $740 million.

Table G10: **Short-run macroeconomic effects of buying more in Australia (per cent changes[a])**

Balance of trade (1992-93 $ million)	570	Real government borrowing requirement (as % of GDP)	-0.1
Real consumption	0.1	CPI	0.2
Export volume	-0.2	Real wage before tax	-0.2
Import volume	-1.1	No. of unemployed	-2.5
Real GDP	0.2		

a Excepting Balance of trade.
Source: ORANI projections.

In summary, buying more in Australia would provide small benefits for the economy in the short run[2].

Long-run effects

In the long run, capital stocks would increase in industries stimulated by the purchase of more Australian goods. This would facilitate the expansion of output in these industries, while unit profits would converge (Table G11).

Table G11: **Long-run industry-specific effects of buying more in Australia (per cent changes)**

Industry	*Prices*	*Output*	*Demand for labour*	*Unit profits*	*Change in volume of imports*
Electronic equipment	0.5	4.3	4.2	0.4	-2.0
Business services nec	0.6	0.2	0.1	0.5	-2.3
Petroleum, coal products	0.3	..	..	0.3	-0.7
Electrical	0.5	2.7	2.7	0.4	-3.6
Chemical products nec	0.5	2.4	2.4	0.4	-5.5
Aircraft	0.5	12.2	12.2	0.4	-4.7

.. less than + or - 0.05 per cent.
Source: ORANI projections.

The adverse impact of buying more Australian goods on export-oriented industries would be more marked in the long run than the short run (Table G12). In addition to declines in exports, the model projects declines in output in the agricultural and mining sectors. In the long run, capital is projected to move out of these sectors into manufacturing to help satisfy the increase in demand for domestic goods.

[2] These projections are consistent with an earlier short-run ORANI study of a more general 'Buy Australian' campaign, which showed that induced negative effects could offset the apparent benefits of the campaign (Horridge, Parmenter and Warr 1987). In a long-run ORANI study of a more general 'Buy Australian' campaign, the economy-wide effects were negligible when a labour supply constraint was imposed (Marsden 1994).

Table G12: **Long-run sectoral effects of buying more in Australia (per cent changes)**

	Output	*Exports*
Agriculture	-0.5	-0.3
Mining	-1.4	-1.9
Manufacturing	0.2	-1.8
Services	..	..

.. less than + or - 0.05 per cent.
Source: ORANI projections.

The negligible change in real GDP (a decline of $80 million) coupled with a small deterioration of the balance of trade ($150 million) indicates that buying more Australian goods would not be of long-term benefit to the economy (Table G13).

Table G13: **Long-run macroeconomic effects of buying more in Australia (per cent changes[a])**

Balance of trade (1992-93 $ million)	-150	Real GDP	..
Real consumption	0.1	CPI	0.5
Export volume	-1.2	Real wage before tax	0.2
Import volume	-1.0	Participation rate	..

a. Excepting Balance of trade. .. less than + or - 0.05.
Source: ORANI projections.

APPENDIX H: THE COMMISSION'S SURVEY OF SELECTED FIRMS WITH DEFENCE WORK

In the terms of reference, the Commission was requested to report on 'the impact, including regional effects and industry development aspects, of defence procurement programs and institutional arrangements on particular industries such as shipbuilding, aerospace, electronics and engineering'. It was also requested to report on 'the extent to which Australian industry is reliant on Australian defence procurement'. In seeking information about these matters, the Commission updated a survey of firms with defence work previously undertaken by the Allen Consultancy Group in 1992 as part of the Price review. This appendix provides a brief reminder of the Allen survey, and then reports the results of the Commission's survey.

H1 The Allen Group's survey

The Allen Group was commissioned by Defence to 'provide a description and economic analysis of Australia's defence industry'. For its survey and report, the Allen Group defined defence industry as:

> that part of Australian industry providing goods and services or capabilities which are strategically important to Defence. (Allen Consulting Group 1992a, p. 20)

Six major areas of industrial activity related to defence were identified and surveyed: electronics and communications; shipbuilding and repair; aerospace; information technology (IT); ordnance; and vehicles.

The breakdown of responses by industrial activity is shown in Table H1.

Table H1: **Response to the Allen Group survey**

Industry	*Responses*
Electronics and communications	21
Shipbuilding and repair	8
Aerospace	13
Information technology	5
Vehicles, Ordnance, and Other sectors	10
Total	*57*

Source: Allen Consulting Group 1992b.

Of the 60 companies surveyed, 54 companies replied. As ADI has a number of industry specific divisions, its response was grouped in to four separate responses, taking the total to 57.

The companies surveyed each had defence works or contracts. The survey sought information on each company's background, revenue, export sales, and R&D. Defence-related employment was not surveyed. Companies were also given the opportunity to express their views on defence policy for industry.

Table H2 summarises information obtained in the survey, which related to 1990-91.

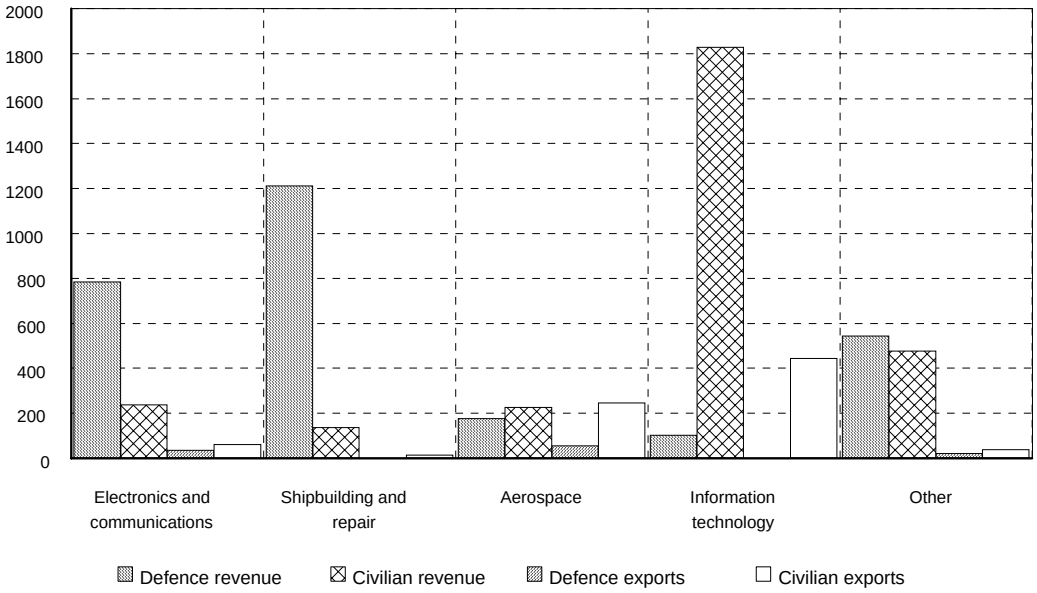
Table H2: **Allen Group survey results**

	Revenue			*Employment*	*Exports*			*R&D*
	Total	*Defence*		*Total*	*Total*	*Defence*		*Total*
	$m	*$m*	*%*	*No.*	*$m*	*$m*	*%*	*$m*
Electronics and communications	1 119	785	70	6 421	97	36	37	61
Shipbuilding and repair	1 362	1 212	89	2 947	14	0	0	3
Aerospace	703	177	25	5 476	301	55	18	7
Information technology	2 376	103	4	7 275	444	0	0	102
Other	1 080	543	50	13 560	60	60	35	14
Total	*6 040*	*2 820*		*35 679*	*916*	*112*		*188*

Source: Allen Consulting Group 1992b.

The reliance of the surveyed firms on Australian and export sales, both defence related and civilian, is illustrated in Figure H1.

Figure H1: **Composition of total revenue, Allen Group survey ($m), 1990-91**



Other includes ordnance, vehicles, and other activities.
Source: Allen Consulting Group 1992b.

H2 The Commission's survey

The Commission sought information about revenue, employment, exports, and R&D for 1992-93. It also sought a breakdown of revenue and employment by region to provide information about the regional impact of defence procurement. Some detailed information about the use of electronic components and inputs was also requested to help in the compilation of the ORANI database.

H2.1 Participants

Questionnaires were sent in December 1993 to Allen Group respondents, firms who attended public hearings or made submissions, and firms visited by the Commission.

A total of 62 firms were surveyed and 46 firms replied. The Commission grouped ADI into five separate responses (compared to the Allen Group which segregated ADI into four responses) taking the total to 50 (see Table H3). The questionnaire and a list of the firms to whom the questionnaire was sent are at Attachments 1 and 2 respectively.

The same industry classifications as the Allen Group were used in the Commission's survey. Firms involved in both surveys were classified into the same industry as the Allen Group.

Table H3: **Response to the Industry Commission survey**

Industry	*Responses*
Electronics and communications	20
Shipbuilding and repair	5
Aerospace	11
Information technology	7
Other (including vehicles and ordnance)	7
Total	*50*

Source: Industry Commission survey.

Where necessary in the following tables, information has been grouped together to maintain confidentiality.

H2.2 Industry information

Table H4 summaries the Commission's survey results.

Table H4: **Survey results by sector, Industry Commission 1992-93**

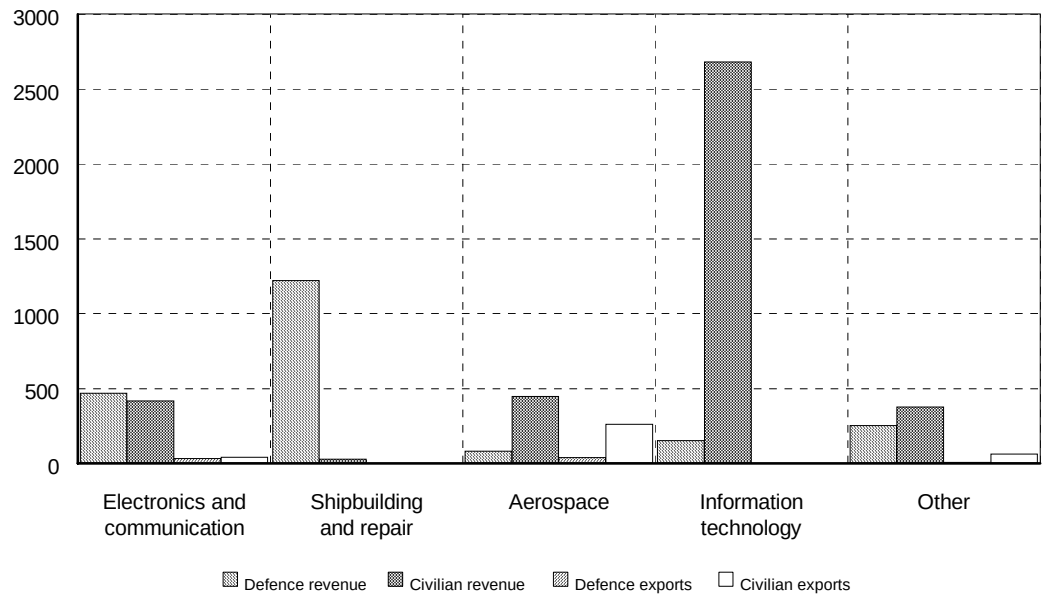
	Revenue			*Employment*			*Exports*[a]			*R&D*[b]		
	Total	*Defence*		*Total*	*Defence*		*Total*	*Defence*		*Total*	*Defence*	
	$m	*$m*	*%*	*No.*	*$m*	*%*	*$m*	*$m*	*%*	*$m*	*$m*	*%*
Electronics and communications	889	470	53	4 524	2 701	60	74	33	45	34	19	56
Shipbuilding and repair	1 252	1 222	98	3 856	3 136	81	c	c	c	c	c	c
Aerospace	531	83	16	4 489	827	18	300	39	13	c	c	c
Information technology	2 782	154	6	8 220	227	3	752	0	0	170	23	14
Other	630	253	40	4 352	1 849	42	70	7	10	8	6	75
Total	*6 084*	*2 182*	*36*	*25 443*	*8 740*	*34*	*1 196*	*79*	*7*	*395*	*225*	*57*

[a] Total excludes shipbuilding. [b] Total includes shipbuilding and aerospace. [c] Confidential.
Source: Industry Commission survey.

Total defence-related revenue for 1992-93 is somewhat less than for 1990-91 (see Table H2), particularly in the electronics and communications sector. With total defence procurement expenditure staying roughly constant relative to total defence outlays (see Table 2.1 in Chapter 2), this could indicate defence work going out to firms not included in the survey. Also of note is the reported decline in defence-related exports.

However, the composition of total revenue sector-by-sector in the Commission's survey (Figure H2) is broadly similar to the Allen Group's survey (Figure H1).

Figure H2: **Composition of total revenue, Industry Commission survey ($m), 1992-93**



Other includes ordnance and vehicles.
Source: Industry Commission survey.

H2.3 Regional information

The firms surveyed were asked to supply information about each of their separate establishments. Table H5 sets out the State distribution of the 113 establishments of the 50 responses. Figure H3 sets out the State distribution by industry sector.

Table H5: **State distribution of establishments**

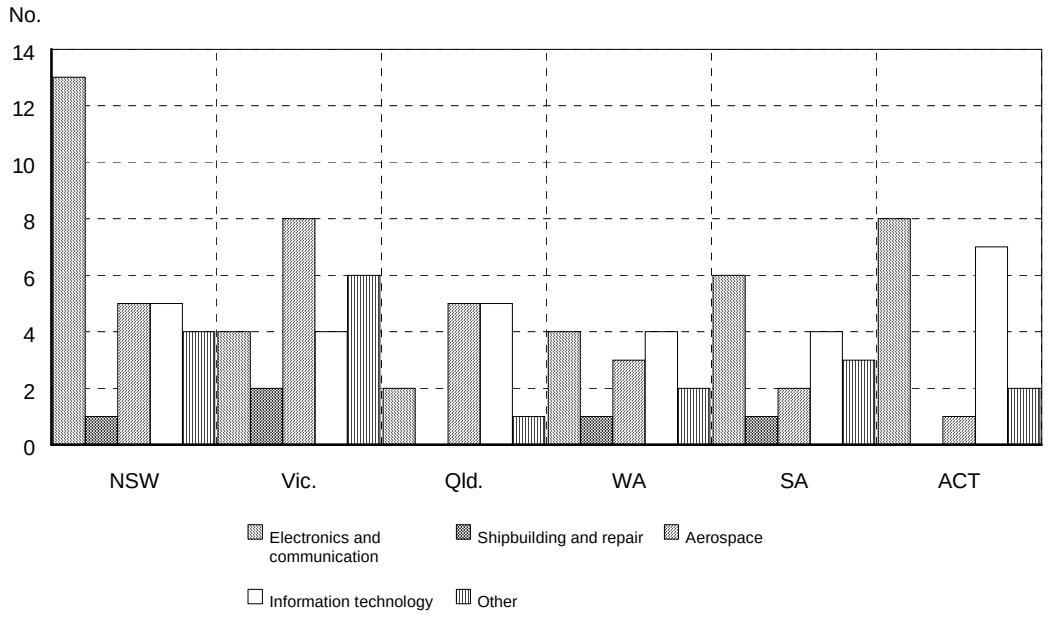
	NSW	*Vic.*[a]	*Qld.*	*WA*	*SA*	*ACT*	*Total*
No. of establishments	28	24	13	14	16	18	113

[a] Includes data for Tasmania.
Source: Industry Commission survey.

Nearly half the firms surveyed had more than one establishment with several firms having two establishments in the same State.

Establishments in Queensland and WA generally operated on a small scale. In contrast, several establishments in Victoria, NSW, SA, and the ACT had a higher level of operation.

Figure H3: **State distribution of establishments by industry sector, 1992-93**



Source: Industry Commission survey.

South Australia accounted for the highest share of defence revenue at 36 per cent, followed by Victoria at 32 per cent and NSW at 23 per cent (see Table H6).

Table H6: **Sales revenue by State ($m), 1992-93**

	NSW	*Vic.*[a]	*Qld.*	*WA*	*SA*	*ACT*	*Total*
Defence	504	689	25	21	791	152	2 182
(% of State total)	*20*	*42*	*13*	*11*	*75*	*33*	*36*
Total	2 517	1 657	198	200	1 050	461	6 084

[a] Includes data for Tasmania.
Source: Industry Commission survey.

South Australia also had the highest State proportion (75 per cent) of total revenue (of the firms surveyed) that was defence related.

The picture is somewhat different for employment (see Table H7). New South Wales accounts for the highest proportion (42 per cent), followed by South Australia and Victoria at 25 per cent. But South Australia has the highest State proportion of total employment (of the firms surveyed) accounted for by defence work (68 per cent).

Table H7: **Employment by State, 1992-93**

	NSW	*Vic.*[a]	*Qld.*	*WA*	*SA*	*ACT*	*Total*
Defence	3 645	2 210	187	183	2 227	288	8 740
(% of State total)	*36*	*30*	*16*	*14*	*68*	*13*	*34*
Total	10 001	7 462	1 206	1 349	3 264	2 161	25 443

[a] Includes data for Tasmania.
Source: Industry Commission survey.

Attachment 1: Survey form

1 Company/Division name_____

2 How many employees in total does your company/division have? _____

3 How many of them are involved in defence work (on a full-time equivalent basis)?_____

4 What was your sales revenue in 1992-93? ($m)_____

5 What was your revenue in 1992-93 from sales to ADF/DoD? ($m) (only include direct sales; please exclude sales made indirectly)_____

6 For the revenue figure in answer to question 5:

a) what was the imported share ($m)_____

b) what was the electronics input share ($m)_____

c) what was the imported share of electronics inputs? ($m)_____

7 Please split the answers shown for questions 3, 4 and 5 by location of your various establishments.

Suburb and State	Employment	Total Revenue	Defence Revenue

8 Of total sales revenue in 1992-93 (question 4), how much was from export sales? ($m)_____

9 Of total export sales (question 8), how much was related to defence? ($m)

_____

10 What was your company's expenditure on R&D in 1992-93? ($m)_____

11 What proportions of this R&D were:

a) related to defence (%)_____

b) funded by ADF/DoD? (%)_____

Name of Contact Person_____

Phone_____

Attachment 2: Recipients of the Industry Commission's survey form

Electronics and communications

ADI (Electronics Division)
Auspace
Avtronics
AWA Defence Industries
British Aerospace Australia
CEA Technologies
CelsiusTech
C J Abell
Compucat
CSC Australia
Electrical Optical Systems
Ericsson Defence Systems
Ferranti Computer Systems (Australia)
Gas Tech Australia
GEC Marconi Systems
KEL Aerospace
MITEC
Morris Productions
Nautronix
Philips Defence Systems
Rockwell Systems Australia
Siemens Plessey Electronics Systems
Stanilite Pacific
Telecom
Thomson Sintra Pacific
Wormald Technology

Shipbuilding and repair

ADI (Naval Engineering Division)
ASC
Dawson Group
Delta Hydraulics
NQEA Australia
Starkstrom Marine
Transfield Shipbuilding

Aerospace

Aircraft Equipment Overhauls and Sales
Airflite
ASTA
BTR Aerospace Australia
Buchanan Aircraft
Godfrey Howden
Hawker de Havilland
Hawker Pacific
Helitech Industries
National Valve and Engineering
Normalair-Garrett Australia
Pacific Aviation (A'Asia)
Rosebank Engineering
Static Engineering

Information technology

BHP Information Technology
Computer Power Group
DEC
IBM Australia
Mincom
Techway Computers
Unisys

Other

ACS
ADI (Ammunitions Division, and Weapons Engineering Division)
ADI (Clothing Division)
ADI (Other)
BHP Engineering
DAS
Dunlite Power Generation
Haulmark Trailers
JRA
Mackay Consolidated Industries
O&S Holdings (Vic)
Promet Valve Company

APPENDIX I: A COMPARISON OF MODELS

Input–output models are frequently used to estimate the economy-wide impacts of a particular activity. However, such models are usually based on the assumption that there is no scarcity of resources available to that activity. Consequently, the estimated benefits at the economy-wide level of a particular activity may be exaggerated. In general equilibrium models, it is usually assumed that at least some resources are in scarce supply to the economy as a whole. It is important that such models capture both supply and demand pressures.

A number of participants in the inquiry have supported their submissions with evidence based on projections from input–output tables. The Victorian Government (Sub. 50) has cited the economy-wide projections of two different models, the Jensen input–output model and the IMP model of the National Institute of Economic and Industry Research. The Allen Consulting Group (1992) also used input–output analysis to study the impact of Defence spending on the economy. In addition, other studies have reported the regional effects of Defence spending using input–output analysis. These studies are cited in Chapter 10.

I1 Input–output models

Input–output analysis serves an illustrative purpose in showing that defence procurement has impacts beyond the industries that produce goods for Defence. Benefits may be associated with additional activity generated in the economy by the initial stimulus. An input–output model traces both the direct and indirect input requirements for each economic activity. In the context of Defence, an input–output model would show, for example, the direct electronics inputs into Defence. It would also trace the indirect inputs of electronics into Defence, such as electronics inputs used in the production of ships and boats in turn sold to Defence. Some activities may provide no inputs directly to Defence, but may nevertheless be stimulated by an increase in defence procurement because they provide inputs into other activities which are sold to Defence.

An input–output model can provide economy-wide estimates of the possible effects of a policy change. Such estimates show the change in resource use in the whole economy stemming from a change in demand in a particular industry. For example, a proposed increase in Defence spending might increase the number of workers employed directly in Defence by 1000, but typically would

increase the labour requirements in the economy as a whole by more than 1000. Similarly, an increase in total Defence spending of $1 million typically would increase the required output for the economy as a whole by more than $1 million.

Such input–output analysis identifies requirements assuming no change in input proportions, but does not take into account that the requirement may not be available from known supplies. There are no resource constraints on capital, labour or land. This is only appropriate when spare labour, capital or land resources are available for additional production. Thus input–output analysis may be used to assess the impact of a particular activity on one small region of the economy, so long as resources are freely mobile into that region, but is likely to be less appropriate for estimating the impact of a particular activity on the economy as a whole. The employment provided by production of Defence goods, for example, tends to be in high-skill areas of the workforce where human resources at the economy-wide level may be scarce, even in a period of high unemployment (Department of Defence, Sub. 29). In general, the absence of supply constraints implies that supply is demand determined in input–output analysis.

Prices are assumed not to change in standard input–output analysis as industry demands change, so that industries continue to use inputs in fixed proportions. The analysis does not take into account, therefore, that if economy-wide labour supply constraints put upward pressure on wages, industries would tend to want to substitute capital for labour.

Demand is determined outside the model. There are no constraints recognised on demand, such as income. This means that there is no recognition that, for example, increased government spending may have to be financed by increased taxes, which in turn may reduce private sector demand.

The assumptions of fixed input proportions, unchangeable price relativities and no supply constraints mean that input–output analysis generates larger economy-wide multiplier estimates than would occur if resource constraints and consequent price and substitution effects played some part.

An implication of the limitations of input–output analysis in policy formulation is presented by CAERA 1993 (p. 31):

> [Input–output analysis] is concerned with measuring the impact of a given change in the economy in economic terms such as output levels and employment. It can identify which industries are likely to be affected. It does not tell us whether the necessary adjustments will be economically optimal. It does not attempt to demonstrate a relationship between the benefits derived by society as a whole from a project and the costs induced as a result of that project.

The benefits and costs of a particular policy cannot be weighed using input–output analysis due to the absence of resource constraints in production or consumption.

I2 The ORANI model

The ORANI model is an example of a computable general equilibrium (CGE) model (Dixon, Parmenter, Vincent and Sutton 1982; Dee 1989; McDougall and Skene 1992). It is a static model in which substitution effects are incorporated in both production and demand. Models of this type overcome some of the drawbacks of typical input–output models.

Supply constraints can be recognised in ORANI for labour, capital and land. The labour supply (ie participation rate) is driven by real wages. While unemployment can vary in the short run, it is usually constrained to some fixed 'natural rate' in the long run. Capital is constrained in the short run but not in the long run. A land constraint is imposed on agricultural industries.

Changes in the input proportions of land, labour and capital can be induced by changes in relative prices. However, there are not normally substitution possibilities between different material inputs in production or investment.

A budget constraint operates on the demand side of the model. An increase in government spending, for example, is in the long run at the expense of consumers through increases in taxes. Such an increase in spending may stimulate some industries but lead to increased costs and consequent reductions in production in others.

In ORANI, the model is in equilibrium when supply equals demand. A policy change may disrupt this equilibrium. A new equilibrium may not be attained until there has been a reallocation of resources in response to price and quantity changes, so that supply equals demand again in the new equilibrium.

By taking account of supply constraints and the negative impact that a policy may have on industries other than those benefiting from direct increases in public expenditure, economy-wide multipliers calculated using ORANI are likely to be smaller but more realistic than those calculated using input–output analysis.

I3 The IMP model

Like ORANI, the IMP model is a multisectoral model of the Australian economy (Brain 1986). IMP draws on a number of theories in an attempt to

approximate ‘real world’ economic conditions more closely than in an internally consistent framework based on microeconomic theory. ORANI, by comparison, is an example of a model based on such theory.

On the supply side of IMP, material inputs are substitutable with labour and capital. Capital usage in IMP is a function of the price of capital relative to material inputs and labour, and also a function of the level of capital stocks in the previous time period.

In IMP, as production expands in a particular industry, the price of output declines due to greater capacity utilisation. Increases in production use spare capacity, thereby preventing upward price pressures. By contrast, unit input requirements in ORANI remain constant as the scale of production increases, so that when an increase in production in one industry puts upward pressure on the prices of inputs to that industry, costs increase and this is passed on in higher output prices.

Prices in IMP are determined as functions of primary factor and material costs, capacity utilisation, import and export prices and a trend variable to capture residual influences. However, the price of competing imports is not incorporated into the pricing mechanism, while the role of demand in determining prices is not made clear in documentation of the model. It therefore appears that the predictions of the model are supply-driven rather than driven by supply and demand together.

Like input–output models but unlike ORANI, there do not appear to be any capital or labour constraints in the IMP model. The different characteristics of ORANI and IMP historically have not resulted in dissimilar outcomes at the industry level, but have resulted in different outcomes at the macroeconomic level (Walker 1988).

I4 Comparing economy-wide results in input-output models and ORANI

The Allen Consulting Group (1992) used two different versions of their model to assess the impact of Defence spending on the economy. Their short-run version of the model was typical of input–output models, lacking labour, capital and government borrowing constraints. Using this version, an across-the-board increase in Defence spending of $100 million resulted in an increase in GDP of $65 million. If the increase in spending was confined to a particular industry instead of being across the board, the effect on GDP depended on the relative capital and import intensities of that industry.

Allen's long-run version, unlike a typical input–output model, contained a resource constraint in the form of a fixed labour supply. The effect of such a constraint was to introduce competition for resources to the model. As fixed input proportions were used in the model, this meant that in order to increase Defence spending by $100 million, not just labour but also capital and material inputs had to be drawn away from other production to service the increase in Defence's demands. By fixing labour inputs in this sort of model, other input usage was effectively fixed. Due to competition for resources, an increase in Defence spending of $100 million in this version of the model resulted in a small overall decline in GDP, in sharp contrast to the short-run result.

In the long run in the Allen model, some industry activity levels increased while those of other industries were reduced, with little change in GDP. With the addition of a resource constraint to the model, the Allen results were of a similar small magnitude to the long-run projections of the impact of Defence spending using ORANI (see Appendix G).

The Jensen input–output model (Subs 36 and 50) projects that for each $100 million of additional manufacturing activity undertaken in Australia, 2950 jobs are created and there is an increase in net turnover (a concept equivalent to output rather than GDP) of $440 million. The results of the projections of buying more in Australia in Appendix G provide some sort of basis for comparison of ORANI results with Jensen's projections. In the short run, $100 million of additional manufacturing activity induced by buying more defence-related goods in Australia would create 1600 jobs and increase net turnover by $130 million. In the long run, there would be virtually no change in net turnover. The marked difference between the Jensen projections and ORANI projections can be explained by the presence of resource constraints in the ORANI model.

I5 Comparison of IMP and ORANI results

The IMP model (Sub. 50, annex) has been used to project the economy-wide effects of the ANZAC ship project. The baseline scenario to which the project is compared is the purchase of eight imported frigates for the Australian navy (Table I1).

Table I1: **Economic impact of ANZAC ship project, IMP model projections**

	GDP change		*Employment change*		*Current account deficit change*
	$m (1989)	*%*	*Number*	*% unemployed*	*% of GDP*
1992-93	338	+0.09	6500	-0.04	+0.02
1996-97	380	+0.10	7000	-0.04	-0.02
2000-01	460	+0.11	7600	-0.04	-0.02
2004-05	110	+0.02	2900	-0.02	-0.01

Source: NIEIR 1989, p. vi.

The ORANI model also can be used to project the impact on the economy of building ANZAC ships in Australia instead of importing them. In IMP, the projected net increase in jobs is 7300 while GDP increases by 0.10 per cent in a typical year. In ORANI, there is a net increase in jobs of 4700 and an increase in real GDP of 0.06 per cent in the short run. These results indicate that the multiplier effect of the switch is greater in IMP than ORANI. This may be explained by an absence of resource constraints in IMP.

APPENDIX J: QUANTIFYING THE REGIONAL IMPACTS OF THE APIN AND COLLINS CLASS SUBMARINE PROJECTS

Regions can gain from defence-related activity, but the gains depend crucially on the mobility of resources. The gains to one region come at the expense of other regions when resources are mobile. The modelling work in this appendix suggests that moving Defence activity to the Northern Territory within a fixed Defence budget is a zero-sum game at the national level. Had the assembly of Collins Class submarines been located in Newcastle instead of Adelaide, the regional multiplier effects would have been slightly smaller, but the differences at the national level would have been negligible.

The APIN project

The APIN (Army Presence In the North) project involves a relocation of Defence personnel to the Northern Territory from New South Wales and Victoria (see Section 10.2.4). It is to occur in two distinct phases.

At present, the project is in the construction phase, with defence facilities (barracks, warehouses, administration buildings, recreation facilities) and housing being built. Estimates from the Department of Defence and the Defence Housing Authority suggest that approximately $200 million will be spent on APIN-related facilities by the year 1995.

The operational phase will initially involve the movement of 573 Defence personnel and approximately 610 spouses and dependants to the Northern Territory by mid-1995. It is planned to have 2220 Defence personnel and approximately 2600 spouses and dependants relocated to the Territory by 2001.

Both the construction and the operational phases will place additional demands on the Territory's economy. The potential impact will depend on the extent to which the additional demands are met from resources already within the Territory, or are met by importing goods, services, skills or equipment from other States. During the construction phase, the impact will also depend on the timing of planned investments.

Although the construction phase involves significant additional expenditure, the call on resources is to be spread over a number of years. The construction of

defence buildings and facilities has so far been budgeted at an average of $45 million a year (in 1993 dollars).

The housing needs of Defence personnel will be met partly by constructing new houses and partly by acquiring existing housing. The Defence Housing Authority estimates that around 1000 new and existing dwellings will be acquired in the Darwin area by the end of 1998-99. At an average cost of $200 000 per house and land package, this involves average investment expenditure of approximately $25 million a year.[1]

For the construction, no major direct relocation of equipment or personnel into the Territory has been necessary. The APIN project team has made a determined effort to give local firms as much chance as possible to win contracts. This has been made possible by having lead contractors (John Holland Construction, Theiss) with a significant and permanent local presence which is independent of the APIN project. Also involved are several local firms. The consistent level of construction activity in the Territory over the years has allowed all these firms to maintain skilled personnel and equipment within the Territory, now being used on the APIN project.

Although the preparation work is being done locally during the construction phase, much of the construction material comes from inter-state. A very rough estimate is that 80 per cent of construction material is being imported, with only 20 per cent being manufactured locally.

Thus the construction phase involves no significant direct importation of skills and equipment, though it does involve the importation of construction materials. However, the construction phase possibly will place indirect pressures on the Territory economy. One possibility is that skill shortages will be created elsewhere, such as in several mining projects and the Territory Government's port development project.

During the operational phase, the main direct impact will be through the presence of the additional Defence personnel, and the extra spending power they will bring to the Territory. Of the approximately $78 million a year Defence will

[1] The estimate for defence facilities is based on information from the APIN Project Office and is more recent than the estimate of $56 million a year for facilities assumed in Kinhill (1993). Housing has been costed at the value used by the Defence Housing Authority, rather than the value of $120 000 per house (excluding land) assumed in Kinhill (1993). Although some housing needs will be met by acquiring existing housing (the mix will depend on spot prices), it is assumed in this appendix that those selling houses to the Defence Housing Authority would in turn build a new house, so that Defence's full expenditure on housing is used as a measure of the additional call on construction resources. The implied total cost of $70 million a year for defence facilities and housing is similar to the total of $66 million a year assumed in Kinhill (1993).

be spending in the Territory by 2001, $66 million will be spent on the salaries of Defence personnel, $3 million on civilian support jobs and $9 million on goods and services for base operations and maintenance.

The Defence personnel are to be transferred to the Territory from New South Wales and Victoria, but the impact will be proportionately much larger on the Territory than on the two States, simply because they are bigger. For example, the 4820 Defence personnel, spouses and dependants to be transferred will eventually represent a 3 per cent addition to the Territory's current population, but the corresponding population losses will be only 0.08 per cent in New South Wales and 0.01 per cent in Victoria. The direct addition to spending power in the Territory, and the direct loss of spending power in the States, will be similar.

While Defence intends to transfer its personnel from the States, it intends to recruit locally for the civilian support jobs. The additional spending by the military and civilian personnel, and the additional spending on base operations and maintenance, will in turn help to create additional jobs indirectly. The net impact on the Territory economy will depend crucially on whether the additional jobs will be filled by existing residents (including the spouses of Defence personnel) or by people attracted to the Territory by the additional boost to activity. The impact will also depend on the extent to which additional demands for capital, both direct and indirect, are met from existing plant and equipment or by additional investment.

Kinhill (1993) has undertaken an input-output study of the impact of both the construction and operational phases of the APIN project on the Territory economy. The input-output methodology (see Appendix I) assumes that the additional demands for resources during both phases can be freely met, either from resources currently in the Territory, or from imported goods and services, from skills migrating, or from capital equipment acquired by new investments. The Kinhill study estimated the impact on the Territory economy, but not the impact on New South Wales and Victoria, nor on the Australian economy as a whole.

This appendix uses Monash-MR, a multi-sector, multi-region model of each State and Territory in Australia (Box J1), to assess the impact of the APIN project on each State and Territory and on the economy as a whole. It also assesses the sensitivity of the results to assumptions about the extent of mobility of skills within Australia, and of capital within Australia and internationally.

Monash-MR allows the impact of each phase of the APIN project to be evaluated under alternative assumptions about the extent of labour and capital mobility. However, it makes one critical assumption about the extent to which goods and services can be freely traded between States and Territories in

response to relative price pressures. The key assumption is that while rural, mining and manufactured products are freely traded, services are not.

Box J1: **The Monash-MR model**

Monash-MR is a multi-regional general equilibrium model of Australia (Meagher and Parmenter, 1992). It models production and consumption in 13 broad sectors for each State and Territory in Australia.

Only the Rural, Mining and Manufacturing commodities are assumed to be regionally tradeable between States and Territories. The various categories of service activity (including construction) used in each State are assumed to be provided from within that State. The Rural and Mining commodities and a composite Non-traditional exports commodity can be exported internationally.

Monash-MR is a comparative static model, giving projections of how each State and Territory economy would differ at some point in the future from where it would have been, had the policy change in question not occurred. It does not trace the underlying growth path of each economy, merely the deviations from that growth path created by policy changes.

In the short run (about two years), nominal wages are assumed to be constant in every industry in all regions, with the changes in labour demand impacting on regional employment rates. In the long run (about ten years), employment rates are held fixed within each region, so that State employment levels move in line with the changes brought about in State population levels.

In the short run, the capital stock in each industry in each region is assumed to be fixed, whereas in the long run there is assumed to be sufficient time for regional capital stocks to adjust so as to eliminate abnormal returns to capital. Since normal returns to capital are assumed to be fixed by world capital markets, capital is fully mobile, not just within Australia but also internationally.

In the short run, State government expenditure on goods and services is assumed to vary with household consumption expenditure within each region, while Federal Government expenditure on goods and services is assumed to be held constant in real terms. In the short run, any difference between outlays and revenue at the State and Federal level is assumed to be covered through changes in government borrowing. In the long run, both the State and Federal governments are assumed to maintain fixed deficits, with State governments adjusting their expenditure relative to household expenditure and the Federal Government adjusting income tax rates to bring this about.

In the long run, two different assumptions are made about labour mobility. Under the first, it is assumed that aside from the migration of Defence personnel, there is no inter-state mobility in response to induced changes in regional labour demand. In the second, it is assumed that there is complete mobility within Australia, so that labour moves between States until wage rates are equalised. The reality is likely to be between these extremes.

The assumption is more realistic for some services than for others. Housing services are non-traded, since residents of a State or Territory by definition have their principal residence in that State or Territory. Public utilities, community

services (health, education, welfare) and personal services (entertainment, restaurants, hairdressing services, etc.) are primarily non-traded, even though the funding for some of these service activities comes from outside of the State. Public administration services (a category that includes defence services) may be traded to a limited extent, but the volume of trade typically would reflect policy decisions and would not change in response to relative price pressures.

Somewhat more arguable is the model's assumption that trade in construction services, wholesale and retail services, transport and communication services, finance and business services does not adjust in response to relative price pressures. The assumption does not mean that a State or Territory cannot acquire more of these services, only that it must do so by the permanent relocation of the capital and skills required to deliver the services rather than by buying the services from skills and capital located elsewhere.

It is quite feasible for Territory residents to employ the services of Sydney legal firms, and one would expect such inter-state trade to increase in the event, say, that Darwin lawyers doubled their legal fees. Similarly, it is feasible for Territory residents to use the services of inter-state transport firms or even, via mail order, the services of inter-state retail outlets. The model nevertheless assumes that inter-state trade in such services is ruled out (or if it exists, does not adjust). One implication is that if there is an increase in the demand for these services within the Territory, there will tend to be upward pressure on the prices of these services that cannot be alleviated by buying more of the services from inter-state. As noted, this is more realistic for local rates, housing prices and rentals, theatre ticket prices or the prices of restaurant meals than it is for legal fees or some transport costs.

In the longer term, it may make little difference that the services themselves cannot be traded if the skills and capital required for delivery are freely mobile. In the short term, however, non-tradeability creates the possibility of bottlenecks. By using an input-output methodology, Kinhill ignored the possibility of bottlenecks. Monash-MR may overstate the extent of non-tradeability of services, but can still be used to investigate the broad implications should such bottlenecks occur.

The construction phase

The construction phase involves additional Federal Government spending of $45 million a year on average for the construction of base facilities, and an additional $25 million a year of investment spending on housing, again primarily involving construction services.

The impact of these spending increases has been examined in a short-run environment (see Box J1), implying that the additional demand for construction

services is assumed to be met entirely from existing capital equipment. This is consistent with the known plans of the main contractors on the APIN project, but also assumes that additional pressures created on other construction projects are not alleviated by importing additional capital equipment. To the extent that this is incorrect, the scenario will overstate the price pressures on the Territory economy.

In the short-run environment, however, there is assumed to be no upward pressure on nominal wages in the Territory, with additional labour demands assumed to be met from reductions in unemployment and/or increases in participation rates. There is known to be an oversupply of unskilled workers in the labour market in Darwin, as there is nationally. But to the extent that the construction phase requires skilled labour currently in short supply, the assumption of fixed nominal wages may understate the bottlenecks and consequent price pressures on the Territory economy.

Table J1: **Short-run effects on the Northern Territory of the APIN construction phase** (per cent change)

Real Territory GDP	1.0	**Sectoral outputs**	
Real household consumption	0.5		
Real investment spending	2.4	Rural	-0.1
Real government consumption		Mining	-0.1
- Territory	0.5	Manufacturing	0.1
- Federal	13.0	Public utilities	0.5
Exports		Construction	7.3
- inter-state	-0.4	Wholesale and retail trade	0.9
- international	-0.5	Transport, communication	0.2
Imports		Finance	1.0
- inter-state	1.7	Housing services	..
- international	0.9	Public administration	0.2
		Community services	0.6
Territory GDP deflator	0.5	Personal services	0.7
Employment	1.6		

.. less than + or - 0.05 per cent.
Source: Monash-MR projections.

The projected impact on the Territory economy is shown in Table J1. Because the construction phase is to be spread over a number of years, the annual impact is reasonably small. Construction activity is projected to rise by just over 7 per

cent a year, with the increase in imports of construction materials from inter-state contributing to a 1.7 per cent increase in inter-state imports.

The direct and indirect boost to activity is projected to increase employment by 1.6 per cent. This results in higher household incomes and an increase in household spending, with an assumed accompanying increase in Territory Government spending. Activity in other industries is therefore stimulated, particularly throughout the services sector.

With services assumed not to be traded among the States and Territories, the additional demand is projected to put upward pressure on prices within the Territory, particularly since the increased demand for construction services allows an increase in unit profits in this industry. The price pressures in other industries are less severe, but are nevertheless sufficient to cause a projected loss of competitiveness which is felt on international markets.

Overall, the construction phase is projected to increase real GDP in the Territory by 1.0 per cent, or about $43 million a year. The employment gains are equivalent to 1200 additional jobs. The impact on the rest of Australia is projected to be negligible, as is the impact on the Australian economy as a whole.

The projected impact of the construction phase on the Territory can be compared with that projected by Kinhill (1993). Kinhill estimated the cumulative impact of additional spending over the entire life of the project. Thus its estimated total income gain of $356 million is equivalent to $36 million a year over ten years. Its estimated employment gain of 9490 jobs should be interpreted as 949 jobs a year over ten years. By reporting a cumulative employment gain, Kinhill is assuming, for example, that an additional job created for one person over ten years is equivalent to one job created for each of ten people for a single year. The annual gain gives a better estimate of the extra people likely to find employment at any point in time.

On an annual basis, the Kinhill estimates of income and employment gains are similar to those estimated by Monash-MR. Kinhill assumes that no bottlenecks or price pressures will occur. The Monash-MR short-run projections allow for bottlenecks, in part because the additional demand for construction services is assumed to be met entirely from existing capital equipment. However, additional labour demands are assumed to be met by reducing unemployment. The construction phase has been spread over a number of years precisely to minimise the possible disruptive effects. The Monash-MR projections suggest that the relatively modest additional demands can be freely met by existing Territory residents.

The operational phase

By 1994-95 Defence will have relocated 573 of its personnel with spouses and dependants to the Territory. If these are drawn from the States in the same proportions as is planned for 2001, 547 of the Defence personnel would come from New South Wales and 26 from Victoria. Direct spending on the Defence personnel, civilian support jobs and operations and maintenance would increase by $20 million in the Territory, and fall by $19 million in New South Wales and $1 million in Victoria.

In the event that neither capital nor additional people would migrate to the Territory in response to the boost in activity, the Territory's real GDP would be projected by Monash-MR to increase by 0.7 per cent, or $31 million a year, with employment gains of 1.2 per cent or 915 people. In New South Wales, real GDP would fall by $26 million and employment by 780 people. The impact on Victoria would be negligible, as would the impact on the Australian economy as a whole.

By 2001, however, the extent of Defence relocation would be more substantial — almost four times the number of Defence personnel would have moved, compared with the situation in 1994–95. It is difficult to assess the extent to which the associated boost to activity would induce additional people to move to the Territory, or over what time frame. The long-term impact of the operational phase has therefore been examined under two different scenarios. In both, capital is mobile within Australia and internationally. In the first, labour is immobile among States and Territories while in the second it is mobile.

The projected long-term impact on the Territory's economy of the operational phase under an assumption of no labour migration (with the exception of the Defence personnel relocated directly) is shown in Table J2.

The construction phase was analysed under the assumption that there was no shortage of skilled or unskilled labour in the Territory. This assumption is appropriate in the case of unskilled labour, but less so in the case of skilled labour. By 2001, however, there is no guarantee that there would be high rates of unemployment of labour in either skill category. It is therefore assumed that in the long run, employment can only increase (over the value it otherwise would have had) to the extent that additional people move to the Territory. In the absence of induced migration and with civilian support staff being recruited locally, employment gains are therefore limited to the additional Defence personnel. This accounts fully for the projected 3 per cent increase in employment in the Territory.

Table J2: **Long-run effects on the Northern Territory of the APIN operational phase — no labour migration** (per cent change)

Real Territory GDP	1.3	**Sectoral outputs**	
Real household consumption	2.8		
Real investment spending	-0.6	Rural	-1.8
Real government consumption		Mining	-4.7
- Territory	2.0	Manufacturing	-0.9
- Federal	20.8	Public utilities	0.1
Exports		Construction	0.2
- inter-state	-2.2	Wholesale and retail trade	1.4
- international	-4.2	Transport, communication	-1.2
Imports		Finance	-0.3
- inter-state	1.0	Housing services	2.5
- international	0.7	Public administration	14.7
		Community services	1.9
Territory GDP deflator	0.6	Personal services	2.0
Nominal wage	0.9		
Employment	3.0		
Capital stock	-1.1		

.. less than + or - 0.05 per cent.
Source: Monash-MR projections.

The additional spending by Defence and civilian support personnel and the demands created by expenditure on base operations and maintenance would lead to pressure for additional job creation. In the absence of induced migration to fill those jobs, the model assumes there would be upward pressure on wages in the Territory. While industries catering to the additional expenditure of the Defence personnel (housing services, community and personal services, wholesale and retail trade) would benefit, other industries would be disadvantaged by having to pay higher wages to attract labour. This accounts for the projected declines, particularly in those industries reliant on international export sales, and for the projected declines in inter-state and international exports.

The higher wages are also projected to discourage investment in export-related activities in the Territory. Existing facilities are projected to depreciate, particularly in the rural and mining sectors, and new investments in these sectors are projected to be diverted elsewhere, particularly into Queensland and Western Australia. This accounts for the Territory's capital stock being lower

than otherwise, and for the projected declines in export-related activity in the transport and finance industries.

In the absence of induced migration, it is not clear that any wage pressures created in the Territory would be spread evenly within the Territory's border, as assumed in Monash-MR. For example, mining projects operated on a fly-in/fly-out basis would be immune to wage pressures generated in the Darwin or Katherine areas, while any wage pressures spilling over into the rural sector could easily be transmitted beyond the Northern Territory border (and thereby diffused).[2] For these reasons, the projected output declines in the rural and mining sectors are likely to be overstated. To the extent that wage pressures are transmitted within the Territory, however, the Monash-MR projections give an indication of the nature of the spillover effects.

Overall, the projected impact is a relatively modest 1.3 per cent annual increase in the Territory's real GDP, equivalent to $54 million a year. Elsewhere in Australia, there are projected to be slight declines in real GDP in New South Wales and Victoria, arising from the loss in spending power from Defence personnel transferred to the Territory. In the case of New South Wales, the loss amounts to 0.06 per cent or $77 million annually in real GDP, associated primarily with a 0.9 per cent decline in public administration (which includes defence) and an associated 0.1 per cent decline in housing services. The loss in Victoria amounts to 0.01 per cent or $9 million in real GDP, with similar industry impacts as in New South Wales. Overall, the impact on the Australian economy is minimal.

Increased employment opportunities and/or higher wages in the Territory might be expected to attract additional people. In the second scenario, it is assumed that induced migration occurs until wage pressures in each State and Territory are equalised. The projected results are shown in Table J3, and differ dramatically from the results obtained under the assumption of no labour migration.

With an induced increase in labour supply to match the increase in labour demand, wage pressures in the Territory are fully alleviated. Employment expands by 5.4 per cent or 4120 jobs in total, compared with the expansion by 3 per cent caused by the additional Defence personnel alone. The defence, housing, community and personal service industries can expand without causing adverse spillover effects on the export-oriented parts of the Territory economy. The overall impact on real GDP is much greater, at 3.9 per cent or $161 million

[2] Unfortunately, DEET's identification of natural labour markets (areas within which individuals usually work or look for work) is of no help in this regard, because the borders of natural labour markets are defined to coincide with the borders of local government areas or statistical local areas, and therefore also coincide with the Territory's border.

a year. These results are close to Kinhill's estimated gains of 4201 jobs and $125 million in annual income.

Table J3: **Long-run effects on the Northern Territory of the APIN operational phase — 'full' labour migration** (per cent change)

Real Territory GDP	3.9	**Sectoral outputs**	
Real household consumption	4.5		
Real investment spending	2.0	Rural	..
Real government consumption		Mining	0.2
- Territory	4.3	Manufacturing	2.5
- Federal	20.8	Public utilities	2.6
Exports		Construction	2.6
- inter-state	..	Wholesale and retail trade	3.7
- international	0.1	Transport, communication	1.8
Imports		Finance	2.2
- inter-state	3.1	Housing services	3.6
- international	3.2	Public administration	15.6
		Community services	3.9
Territory GDP deflator	..	Personal services	4.0
Nominal wage	..		
Employment	5.4		
Capital stock	1.8		

.. less than + or - 0.05 per cent.
Source: Monash-MR projections.

However, the income and employment losses in New South Wales and Victoria are also projected to be corresponding larger. Real GDP is projected to contract by 0.14 per cent or $198 million and employment by 0.17 per cent or 4350 jobs in New South Wales. Real GDP is projected to contract by 0.04 per cent or $42 million and employment by 0.04 per cent or 80 jobs in Victoria. South Australia is also projected to gain because of its role as a supplier of manufactured goods to the Territory. But once again, the overall impact on the Australian economy is minimal.

The long-term impact of the APIN operational phase therefore depends on the extent of induced labour migration between States and Territories. Some very preliminary empirical work can shed light on which of the two extremes — no migration or 'full' migration — is likely to be more accurate. The two Monash-

MR scenarios suggest that upward nominal wage pressure of 0.9 per cent (Table J2) could be alleviated by net migration amounting to 2.4 percentage points worth of the Territory's population (Tables J2 and J3). This can be compared with econometric estimates by Han (forthcoming) of the actual wage responsiveness of net internal migration between States and Territories. Han finds that in response to a 1 per cent increase in real wages in a single State or Territory relative to real wages in Australia as a whole, net quarterly migration would increase by, at most, 0.1 percentage points of population.

The 0.9 per cent nominal wage increase projected in Table J2 was equivalent to a 0.6 per cent real wage increase, since the Territory's consumer price index was projected to rise by 0.3 per cent.[3] According to Han's estimate, a 0.6 per cent real wage differential sustained over, say, ten years, would lead to net inward migration of at most 0.06 percentage points per quarter, or 2.4 percentage points of population over ten years. While this is the same as the Monash-MR projections under 'full' migration, it is unlikely that the real wage differential would be sustained at a full 0.6 per cent in the face of inward migration of this order. However, to the extent that the additional demand for labour in the Territory also lowered the Territory's unemployment rate relative to Australia as a whole, there would be an additional impetus for inward migration, since Han also finds net migration is sensitive to relative unemployment rates.

Han's elasticity estimates need to be qualified because many are not significantly different from zero at conventional testing levels, while a few are also of the wrong sign. In particular, his estimate of the wage responsiveness of net migration into the Territory is found to be of the wrong sign, and not significant. Taken broadly across Australia, however, his estimates support the idea of a reasonable degree of inter-state labour mobility, but only over a relatively long time frame.

The submarine project

What difference would it have made to the States and Territories, or to the Australian economy as a whole, had a decision been made to assemble the Collins Class submarines in Newcastle instead of Adelaide? In terms of direct impacts, one difference would have been in the costs associated with the construction site. Another would have been on the location of industries chosen to supply inputs to the project.

[3] The consumer price index rises by less than the Territory's GDP deflator because the GDP deflator is an index of prices of goods produced in the Territory, while the consumer price index is an index of the prices of goods consumed and therefore includes a significant component of goods imported from inter-state, where cost pressures are negligible.

Had the submarines been assembled in Newcastle, site-specific contracts, such as for site construction and submarine assembly, would have been awarded in New South Wales rather than South Australia. However, it is assumed that in areas where defence capability was the critical consideration, contracts would have been awarded according to the current geographical pattern. For example, many contracts for electronics supplies would still have been awarded to Adelaide firms because of their defence capability, associated with their proximity to DSTO. The contracts awarded to Victorian firms were also related to particular capabilities and would have been awarded regardless of the construction location.

The current regional distribution of average annual project expenditure to date is shown in Table J4, broken down by type of expenditure. The regional breakdown differs slightly from that shown in Table 10.1 because the latter table incorporates planned future expenditure. Table J4 shows that although submarine assembly is based in Adelaide, South Australia has attracted only 45 per cent of the total expenditure. Most of it is for submarine assembly itself (shown as manufacturing activity). There is also a project management component (shown under finance and business services) and a construction component.

Table J4: **Distribution of Submarine Project expenditure in 1992-93 based on cumulative expenditure pattern** (1992-93 $m)

	NSW	*VIC*	*SA*	*Other States and Territories*	*O'seas*	*Total*
Manufacturing	131	34	268	14	146	593
Finance and business services	11	0	23	4	39	77
Communications	0	0	0	0	2	2
Construction	4	0	28	0	0	32
Total	146	34	319	18	187	704

Source: Based on data supplied by Department of Defence for all purchases to end of 1993; Defence 1993a.

It is assumed that, had Newcastle been chosen as the assembly site, only the site-specific components of construction, project administration and submarine assembly would have been undertaken in Newcastle. The electrical, electronic, mechanical and other component goods incorporated into the submarines would

have been obtained from the same geographic source as currently. On this basis, an estimated $144.4 million of manufacturing activity, $21.4 million of finance activity and $25.4 million of construction activity to date would have been located in Newcastle.

By being chosen as the site for submarine assembly, South Australia has therefore gained an estimated $191 million of direct benefit, in terms of annual project expenditure it would not have attracted otherwise. This amounts to 27 per cent of average annual project costs to date.

The ultimate impact on either South Australia or New South Wales would include indirect effects, particularly through the stimulus for indirect job creation. Monash-MR has been used to compare the total impact on South Australia and New South Wales, as well as the net impact on the Australian economy as a whole, from locating the submarine assembly operation in Adelaide or Newcastle.

The comparison assumes that the construction, administration and assembly costs would have been the same in dollar terms in Newcastle as in Adelaide. It therefore abstracts from the comparative cost considerations that went into the site choice originally. As a proportion of national GDP, such cost differences would be relatively small.

However, the comparison can be used to assess whether the indirect spillover benefits would have differed. It can therefore assess the impact of the site location on the longer term development of each region, as well as on the economy as a whole.

The model is first used to estimate the impact on each State and Territory of the entire submarine project, given that submarine assembly is located in Adelaide. It therefore estimates the direct and indirect impact of the expenditure pattern shown in Table J4. The model is then used to estimate the impact of the entire project, given an alternative location for submarine assembly in Newcastle. It therefore estimates the direct and indirect impact of the same $704 million of total annual expenditure, but with variations in the regional location of expenditure noted above.

The net impact of the location choice can be measured by the difference between the two scenarios. In one respect, however, the net regional impact is likely to be overstated. In each scenario, the total submarine expenditure is assumed to be ‘funded’ by an equivalent $704 million expansion in the Federal Government deficit.[4] In reality, the submarine project has been funded by

[4] Variations in Federal income tax rates are still used to offset the additional indirect pressures on the Federal deficit.

marginal adjustments to other Defence projects, each with its own regional implications.

The long-term impacts have been estimated, assuming capital to be mobile both within Australia and internationally. As before, however, the impacts have been estimated under two alternative assumptions about the extent of regional labour migration, one involving no internal migration and one involving completely free internal migration, in response to regional wage pressures.

With no internal migration, the projected impact on the South Australian economy of having assembly located in Adelaide is projected to be similar to the impact that APIN had on the Northern Territory under a similar migration assumption. Activities directly involved in the submarine project are projected to gain, but wage and price pressures adversely affect export-oriented activities. With no internal migration, there is assumed to be no scope for net job creation. The decline in export-oriented activity is projected to lead to a slight decline in the State's real GDP.

With no internal migration, the projected impact on the New South Wales economy of having assembly located in Newcastle is equally muted. In both cases, the net impact on other States involved in the project is also small. The impact on the economy as a whole is negligible.

It is likely that a project of this magnitude would induce internal migration, although not necessarily to the extent assumed in the 'full' migration scenario. The results from that scenario can nevertheless be used to compare the extent of the direct and indirect gains to each State economy of the alternative regional location. The impact on State GDP and employment in South Australia and New South Wales is shown in Table J5.

Table J5: **Long-run effects of annual submarine project expenditure**

	Assembly located in Adelaide	*Assembly located in Newcastle*	*Difference*
Impact on South Australia			
Real State GDP (1992-93 $m)	107.8	10.7	97.1
Employment (jobs)	2610	310	2300
Impact on New South Wales			
Real State GDP (1992-93 $m)	4.7	96.0	91.3
Employment (jobs)	30	1890	1860

Source: Monash-MR projections.

The input-output study by Burgan, Mules and Molloy estimated the direct and indirect impact on the South Australian economy of 1993 expenditure on a number of Defence projects, including the Collins Class submarine project (see Section 10.2.2). It is difficult to assess accurately from their description the proportion that is accounted for by the submarine project alone, but indications are that it lies between 55 and 70 per cent. In their 'low' scenario the estimated total gains from all projects were $271 million a year in Gross State Product (a concept similar to State GDP), with employment gains of 5430 jobs. If 55 per cent of this is assumed to come from the submarine project, then the submarine contribution of $150 million in Gross State Product and 2990 jobs is similar in magnitude to the gains projected for South Australia in the top left hand corner of Table J5. However, both sets of estimates would be overstated to the extent that labour was not completely mobile within Australia.

Table J5 also shows that, had assembly been located in Newcastle, the South Australian economy would have benefited by $10.7 million a year in income and 310 jobs from contracts still awarded in South Australia. The net gain to the South Australian economy from the location of assembly operations in Adelaide rather than Newcastle is estimated at $97.1 million a year in income and 2300 jobs.

Finally, Table J5 shows that, had the assembly operations been located in Newcastle, the gains to New South Wales in both gross and net terms would have been slightly smaller than the gains to South Australia from location in South Australia. The reason is attributable to differences in the labour intensity of several activities in the two States, particularly in export-oriented activity.

The employment gains are therefore smaller in New South Wales, and this is in turn reflected in the smaller income gains.

Elsewhere in Australia, Victoria is projected to gain by around $130 million a year in income and around 2300 jobs from the submarine project, irrespective of the location of the assembly operations. The gains are relatively large given Victoria's small direct involvement in the project, but Victoria gains indirectly from its close trade linkages with the other two States.

The Monash-MR database indicates, for example, that 22 per cent of the material inputs used in manufacturing in South Australia are sourced from Victoria, compared with 37 per cent from the home State. Similarly, 20 per cent of the material inputs into manufacturing in New South Wales are sourced from Victoria, compared with 45 per cent from the home State. A similar trade pattern exists for material inputs into construction activity in New South Wales and South Australia. Thus irrespective of the location of the submarine project, Victoria will gain an indirect share of the total project expenditure that far exceeds its direct share.

There are projected to be corresponding income and employment losses elsewhere in Australia to offset the gains to South Australia, New South Wales and Victoria. The overall impact on the economy as a whole is negligible.

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