

RESEARCH PROGRAMS FOR GOVERNMENT POLICY DEVELOPMENT

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Introduction

Australian federal governments have, over recent decades, established several research organisations to assist them in policy development. This development is not surprising given the pressures on policy departments to focus on short term issues and the clear need for organisations removed from the day to day pressures which are able to consider and advise on complex economic and technical matters and on longer term strategic issues. Research organisations which fulfil this role need to be sufficiently independent so that their work is objective and credible but sufficiently close to government so that their research programs are relevant and responsive to government policy needs.

Management of a research organisation, whose function is to advise government, must accommodate a range of often conflicting pressures. Its high level advice to government must be easily understood and unadorned by excessive detail. On the other hand professional staff generally set a high standard for themselves and have a tendency to produce detailed analyses of issues. It is also important that researchers, while being aware of the political implications of their work, refrain from allowing their own value judgements to intrude into the organisation's work. Management must also provide an environment in which professional staff can achieve the recognition and respect of their peers. The resolution of these pressures is a challenge but essential if the objective of relevant and credible advice is to be achieved.

This paper discusses the development of the Bureau of Transport Economics (BTE) and how it has evolved in response to these pressures. Case studies in the areas of road transport and shipping are given to provide contemporary examples of the Bureau's approach to its task. The paper focusses on how the BTE has responded to the needs of government but concludes by drawing on the criteria by which research organisations such as the BTE are assessed.

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Development of the Bureau of Transport Economics

The BTE was formally established in early 1970 although it did not become operational until 1971. The responsible Minister at the time, in announcing the decision to establish the BTE, said that the function of the Bureau was to analyse the costs and economics of transport in Australia. Its work was to be directed primarily to expert and objective appraisal studies and investigations of surface transport costs, efficiencies, systems and facilities. There was a commonly held view at that time that there was a need for such an organisation to take a national overview of the whole transport scene.

The planned role of the BTE at that time should be seen in the context of the federal system that operates in Australia. Domestic transport policies are, for the most part, the responsibility of state governments. There is no guarantee that, in pursuing their individual objectives, states will arrive at solutions which are optimal from a national viewpoint. At the time of the BTE's establishment it was recognised that many transport problems extended across state boundaries and that the Commonwealth Government, working in co-operation with the states, had a legitimate policy interest in solving them. The role of the BTE was seen, as that time, as facilitating the development of solutions to national transport problems.

Prior to the establishment of the BTE the Federal Government had, in 1964, established the Commonwealth Bureau of Roads which, unlike the BTE, was established by an Act of Parliament. Its main function, as defined in its Act, was

'To investigate and, from time to time, report to the Minister on matters relating to roads or road transport for the purpose of assisting the Government of the Commonwealth in the consideration by the Government of the grant of financial assistance by the Parliament to the States in connection with roads or road transport.'⁽¹⁾

Obviously the BTE, with a rather broad set of functions, had the potential to overlap the role of the Commonwealth Bureau of Roads (CBR). In practice, the roles were complementary, with reasonable liaison and co-ordination of the activities of the two organisations. However, the CBR experienced some difficulty in responding to government needs and in the provision of relevant advice on road matters. Aviation was not initially included in the BTE's sphere of activities. It was not until aviation was brought into the same portfolio as surface transport in late 1972 that it became the subject of BTE investigations.

A significant influence on the way the BTE approached its task in the early days was the lack of expertise in transport project analysis in state governments. This led to cost-benefit analysis of specific transport projects forming a large part of the BTE's early work programs. Indeed, the first report released by the BTE was an appraisal of a proposed rail link between Canberra (the national capital of Australia) and the nearby town of Yass located on the rail link between Sydney and Melbourne.⁽²⁾

This role was further enhanced when the government which came into power in 1972 drew on a BTE study to develop a policy of providing grants for urban public transport projects in major Australian cities. Grants were only provided for projects which produced a satisfactory benefit-cost ratio following evaluation, initially by the BTE and later by the Federal Department of Transport. An indirect effect of this procedure was that state government officials themselves become much more proficient at

project evaluation. The process whereby the BTE develops an evaluation methodology and subsequently hands the routine evaluation task to another organisation has been repeated on a number of occasions. It highlights the BTE policy of avoiding routine tasks that are inconsistent with or deflect the BTE from its principal research role.

Further examples of the BTE's project analysis work during that period can be found in its analyses of railway projects. Chief among these were its reports on various mainline upgrading projects. These were generally analyses of projects designed to improve capacity of single tracks by the installation of improved signalling systems and additional crossing loops. The BTE developed an advanced simulation model specifically for the purpose of undertaking these studies.

A major change in the Bureau's functions took place in 1977. The Commonwealth Government at that time formally disbanded the CBR and amalgamated its functions with those of the BTE. The new organisation was to retain the name of Bureau of Transport Economics. The amalgamation provoked considerable debate about the appropriate form the relationship between a government funded research body and the government should take, the question of the appropriate degree of independence being the main issue. The then Minister for Transport had the following to say when the Bill to repeal the Bureau of Roads Act was being debated in the Commonwealth Parliament:

'It is important to realise, however, that the BTE has similar autonomy to the Bureau of Roads. For instance, the Director has direct access to me, as Minister for Transport, on all matters relating to the Bureau's work. There is a considerable misunderstanding in the minds of some people who think that the BTE is a division within the Department of Transport and is thus subject to direct influence by the Department. It is true that the BTE receives administrative support from the Department of Transport. This allows for considerable cost savings but does not put the Department in a position where it is able to alter the professional advice the BTE gives. The BTE has no less and no more independence in this regard than the Bureau of Roads. The independence of the BTE's advice and the Director's free access to me as Minister are established facts. There will certainly be no erosion of these rights as a result of amalgamation.'⁽³⁾

Typical of the view that attachment to the Department of Transport would compromise the BTE's independence is that expressed in the Australian Municipal Journal:

'The present position gives the Commonwealth an accurate assessment of roading requirements in its various forms, assesses State and local government capacity to meet part of the cost, and sets out policy options open to the Government. What is more, it brings an enlightened approach to the general question of roading and, apart from recommending the best use of resources, is able to exercise control in this area which calls for joint governmental endeavour. Amalgamation and integration within the Department of Transport could destroy the main attributes of the Bureau (of Roads).

'Attributes like independence from departmental and political influence are important. They give the Bureau credibility in the eyes of State and local governments.'⁽⁴⁾

The CBR itself commented on its independence in its 1975 report.

'As the Bureau is small, autonomous and free from the normal departmental function of administration of legislation, we are able to work closely with official and unofficial groups within the community. Equally, we can, in a completely independent manner, express and evaluate the views of governmental, industrial and community organisations. Our experience has confirmed our view that the Statutory Authority has a very important role in open government.'⁽⁵⁾

The question of independence was seen as important by all those involved in the debate. Those who favoured an organisation similar to the CBR (ie a Statutory Authority with its own Act of Parliament, organisational autonomy and with minimum opportunity for political influence by the government) were concerned that its independence and credibility would be compromised by a close association with the Department of Transport. The basis for this concern appeared to be a fear that only views acceptable to the government would appear in published reports, even though there was no evidence that any BTE reports prior to this period had suffered in this way. From the government's viewpoint, two aspects were of prime importance. First, advice provided in BTE reports needed to be relevant to the policy issues under consideration. Secondly, the reports needed to be credible in the eyes of those affected by the recommendations flowing from the reports. Otherwise the government could have difficulty in gaining acceptance of the policy implications of the recommendations.

A Statutory Authority has little difficulty in achieving the second objective but may have difficulty in providing relevant policy advice. It may also, in a somewhat paradoxical way, find it more difficult to avoid embedding policy type value judgements in its analyses than organisations like the BTE which specifically eschew recommendations and merely reach conclusions. Politics is often described as being the art of the possible and criticisms made of the CBR suggest that in its later years it was not fully in touch with the policy needs of the government, or that it tended to provide policy recommendations which were not feasible politically.

On the other hand, a research bureau attached to a government department has the opposite problem. Close contact with the government makes it easier to keep in touch with policy issues, but it must work harder at maintaining its credibility with those outside government. The amalgamation of the two organisations thus served to bring into focus the relationship that should exist between a research bureau and the government which funds it.

The amalgamated organisation continued to be attached to the Department of Transport and continued to operate with no formal charter determined by parliament. The arrangements seem to have been successful with the BTE's clients in the transport industry being generally satisfied with the degree of independence it has exhibited.

Although there is no formal charter for the BTE's operations, the Minister did enunciate the functions that he believed the BTE should have during the parliamentary debate on the abolition of the CBR. These were, and they have not been subsequently modified:

'Undertake evaluations of the Australian road situation ... by consultation in the broadest sense with State and local government authorities ... Advise and assist the Government in its consideration of financial assistance to the States for roads and road transport.

Advise and assist in the formulation of policies aimed at the reduction of transport costs.

Undertake research and advise on the improvement of transport efficiency.

Advise and assist on the rationalised planning of transport facilities.

Advise on the optimal allocations of resources in the transport field.

Assess and advise on transport planning and administration procedures.'(6)

Also in 1977 Commonwealth and State transport ministers agreed to establish the Australian Railway Research and Development Organisation (ARRDO). ARRDO had the objective of providing a national centre for the generation and development of analytical research activities and information systems on administrative, economic and technical planning and policy matters relating to Australian government railways which are operated as five separate systems (four state, one federal). The establishment of ARRDO enabled the BTE to reduce its emphasis on rail at a time when it was required to allocate more resources to road studies.

While the institutional arrangements involving the BTE have remained stable since 1977 the type of work it has done has continued to evolve. As previously noted much of the BTE's earlier work program involved the appraisal of specific transport projects. As state government evaluation expertise developed, the need for BTE involvement declined. While project evaluation still forms an important part of BTE activities, the emphasis has moved very much away from this type of work. Now the BTE studies are of a much more national strategic character. This has involved the BTE in what could be described as more of a "front line" role in policy development. The role of the BTE is now seen as moving to one of undertaking studies which provide objective analyses of policy issues which will assist the government in the development of new initiatives and, where relevant, new legislation. Such an approach requires a range of supporting studies to develop appropriate techniques, and to develop a data base of relevant information. A useful way to illustrate the evolution of the way the BTE undertakes its studies and the relationship between the BTE and the government is to discuss some case studies.

Case Study - Roads

In Australia construction and maintenance of roads is basically the responsibility of State and local governments. However, since 1922 the Commonwealth Government has been involved in the financing of road expenditure. It does this through a provision of the Constitution (Section 96) which gives the Commonwealth Government the power "to grant financial assistance to any State on such terms and conditions as the Parliament sees fit".

The degree to which the Government exercised the powers available to it varied from a strongly interventionist approach in the 1920s to very few conditions in the late 1930s and 1940s.

Rapidly increasing car ownership in the early 1960s resulted in a need for increased roads expenditure. At the same time there was pressure for basing roads expenditure on a roads needs approach, whereby the expenditure estimated to be required to bring the road system up to a specified standard would provide a basis for the assessment of the appropriate level of funding. This view was supported by the publication of reports on road funding, in 1961 and 1963, by the National Association of Australian State

Road Authorities. It was soon after this that the Government established the CBR. The reasons given for the CBR's establishment were said to arise "primarily from the Commonwealth's deep and increasing involvement in the financing of road expenditure in Australia"(7). Other reasons were:

- . lack of available data on which to base sound expenditure decisions;
- . the need for the Commonwealth to make competent and reliable appraisals of roads needs;
- . the need for a national perspective on roads; and
- . the economic significance of roads expenditure.

The CBR produced its first major report on roads in 1969. The analysis that led to the recommendations in the report "involved, inter alia, a survey of the Australian road systems, including an assessment of the expenditure required to bring the roads up to a specified standard; economic evaluations of the road improvements revealed to be necessary by the survey; an examination of road maintenance expenditure; a review of past road expenditure; consideration of the availability of resources, both physical and financial; and an assessment of the national economy to provide for road expenditure in the future".(8)

The second major report in 1973 took an almost identical approach. The survey of the road systems was more comprehensive and produced the following:

- . an inventory of the Australian road system, which included information on physical conditions and traffic characteristics;
- . a list of road sections providing inadequate service;
- . a list of 240,000 proposed construction projects and their costs which would remove the inadequacies and provide for future traffic;
- . estimates of future maintenance and administration expenditure over the survey period.

A broader evaluation was adopted which took account of social costs and benefits and a computer system was used to schedule the projects in order of priority determined by their economic worth.

The 1975 report was based on an updated survey and overall level of funding recommended was again based on cost-benefit analyses of projects required to bring the road system up to a specified standard. The 1975 report was issued at a time when the government was faced with increasing budget deficits and was attempting to restrain government expenditure. As in previous CBR studies the returns on road investment were generally assessed as high and the funding recommended by the CBR was well in excess of the amount that the government of the day was willing to provide.

Following the amalgamation of the CBR and the BTE in 1977 the reformed BTE produced the next major report on roads in 1979. The 1979 report adopted the same general approach as the previous CBR report in that it used an updated roads survey to identify deficiencies and the costs required to correct the deficiencies. A warranted program was developed based on cost-benefit analyses of the projects arising from the identification of deficiencies. However, the report had three significant departures from the earlier CBR reports.

"First, the report does not make specific total funding recommendations, nor does it attempt to suggest what should be the future levels of Commonwealth, State and local government funding of roads expenditure. Second, the report focusses considerable attention on past patterns of road expenditure and on the economic merit of these expenditures. Third, the sensitivity of the results of the economic analysis to different levels of overall road funding is examined."(9)

These changes were a direct result of the BTE's perception of the policy needs of the government. A recommendation of total expenditure which was at variance with what the government is willing to fund is of little benefit. The approach adopted by the BTE of providing an assessment of the sensitivity of the economic benefits to a range of levels of expenditure is somewhat more realistic and scientifically legitimate. Also this approach allows the BTE to retain its professional independence and not to be seen as supporting what ever level of expenditure the government chooses.

The next report was in 1984. One of the major changes was the move away from the identification of an economically warranted program based on a benefit-cost analysis of a notional project list. One of the difficulties with the earlier approach was that the program bore little relationship with the program actually implemented by state and local governments. Nor did the priorities determined by the evaluation process accord at all well with the way in which expenditure priorities were determined in practice.

The 1984 report started from the premise that there are two frameworks within which road investment decisions are made. The first covers the provisions of a basic road infrastructure. It is assumed in this framework that each person or community is entitled to a basic road system of appropriate quality. The quality which is judged to be reasonable varies over time but is, in general, the result of a political decision process and is not appropriately subject to economic analysis. The second framework covers any necessary upgradings of the basic infrastructure which can reasonably be assessed on their economic merits.

Starting from these frameworks and taking account of how priorities are set in practice, the BTE suggested three approaches to resource allocation analysis:

- ". determination of resources required to keep the system in being;
- . identification of the additional resources required to maintain existing levels of service (that is, to keep pace with existing traffic growth); and
- . identification of further resources needed to upgrade the existing levels of service to match popular expectations or to maximise economic efficiency."(10)

The BTE approach on this occasion was "based on a description of the existing road system and its performance and on the behaviour of various parties involved in its development as a basis for predicting the probably response to different levels and patterns of funding"(11). While cost-benefit analysis was still an important part of the 1984 study it was undertaken in a broader context which contrasted with the earlier relatively narrow focus on economic evaluation as the basis for funding recommendations.

The BTE approach was thus responsive to the manner in which project priorities are set in practice and to the information the government needed

in deciding its future road financing commitments. The BTE is now considering its next roads studies. Again, in deciding on what changes need to be made in its approach the BTE will need to take into account the policy decisions the government will be facing as well as the information it will need in making those decisions. This implies that the study will be sensitive to the socio-political context in which road funding decisions are taken and as such will continue the trend to a broad based analysis rather than one which relies on narrower cost-benefit criteria.

Case Study - Liner Shipping

Australia is a major trading nation. It is not a maritime nation and is therefore largely dependent on shipping services provided by non-Australian companies for the transport of its imports and exports. Australia is more dependent on shipping services than most other countries because of its relative geographic isolation from the world's major markets, it therefore, has a deep concern that those services are reliable, of appropriate quality and provided at a competitive price.

Like many other trading nations, shipping conferences provide services to the major markets for Australia's products. Government policy has been to encourage the provision of liner services by conferences by giving them legislative endorsement, particularly through exempting them from the anti-competitive provisions of the Trade Practices Act. The government in recognition of the market power such support gives the conferences, has sought to give some countervailing power to the shippers. It has done this through the provision of support for the Australian Shippers' Council (ASC) which represents shippers during freight rate negotiations with the conferences. Not all shippers are represented by the ASC in freight rate negotiations. Some of the larger commodity groups (eg meat and wool) undertake their own negotiations outside the ASC but remain members of the ASC.

In recent years non-conference lines have gained significant cargo shares at the expense of the conferences. Also, softening of some of the commodity markets has led to a greater concern for transport costs. Both of these factors have contributed to a concern regarding the efficiency and effectiveness of the present liner shipping arrangements.

The government, in response to these concerns, set up a task force to consider, report and make recommendations to the Minister for Transport on matters relating to Australian overseas liner shipping. The task force includes representatives from shippers, ship owners and unions. At the time the task force was established there was a lack of information generally regarding the structure and operations of the industry. The Minister for Transport, therefore, asked the BTE to undertake a descriptive study of the industry to assist the task force in its deliberations and to provide a factual background to assist the government in its consideration of the task force's report.

The BTE was asked to investigate and report on:

1. the physical characteristics of the major inwards and outwards trade routes including the commodities carried and the types of service;
2. the size, ownership and organisation of fleets serving these trades, with particular reference to Australian flag participation;
3. conference and non-conference capacity in these trades and the impact of trends in capacity and other relevant factors on the level and stability of services;

4. rates charged for key commodities and the factors associated with variations in rate structures;
5. the extent and nature of competition within conferences and by 'outsiders' and its effect on rates and other aspects of the industry; and
6. technological developments affecting liner shipping and their implications for the structure of Australia's shipping service and fleet replacement programs.

The terms of reference required the BTE to develop an information base rather than explicitly address policy issues. The BTE, in addressing the terms of reference, undertook a detailed examination of the industry. It also examined three aspects not specifically mentioned in the terms of reference but which it considered necessary to an understanding of the industry. They were:

1. An historical review of the development of the industry structure with particular reference to the overseas and Australian regulatory environment in which liner shipping and national flag participation have developed.
2. An examination of the current arrangements which focusses on the physical aspects of the movement of overseas freight, the organisation of the industry and the institutional setting.
3. An examination of the shore-based activities of liner operators to, and in particular, the relation of these activities to the shipping operations.

A traditional approach to the study (ie an examination of the structure, conduct and performance of the industry) was chosen because it was believed to be relevant to liner shipping, particularly in terms of the issues of market power, the adequacy of the service provided and the rates charged.

The first stage of the study was directed at identifying the issues of concern and possible information sources. This enabled the study methodology to be developed in a manner that would be useful to the task force in its consideration of the available policy options.

The next step was to approach shippers to obtain information on cargo flows and attitudes to conference and non-conference lines. These attitudes were elicited by means of a survey which sought information on the importance of service characteristics and the perceived relative performance of conference and non-conference lines with respect to those characteristics. Information was also provided by both conference and non-conference lines. A significant research task was the development of a computer data base which contained trade statistics as well as data on shipping services, characteristics of ships used on Australia's liner trades, stowage factors, freight rates and shipping line organisations.

A central issue confronting the government in consideration of its liner shipping policy is, whether the conferences should continue to receive legislative protection by way of exemption from those provisions of the Trade Practices Act which are intended to prevent collusion on pricing. An important aspect of this question is the extent to which competitive forces are significant and influence freight rates and service quality. The BTE has paid close attention to this issue and generally it has found that on those trades where non-conference competition exists there has been a

substantial fall in freight rates in real terms. Non-conference lines generally provide a lower level of service than the conference lines, especially in terms of frequency but this is offset by lower freight rates.

The BTE also examined the liner trades in the context of the theory of contestable markets. To date this examination has probably shed as much light on the usefulness and applicability in practice of the new theory as it has on the need for policy changes.

The liner shipping study has laid the foundation for future BTE work in this area as well as providing more background for the government in its more immediate policy considerations.

Case Study - Shore-Based Shipping Costs

While overseas liner shipping arrangements are of concern, it is also recognised that liner shipping depends intimately on associated shore-based activities. Shore-based shipping costs have become of especial concern in Australia as they appear to be somewhat out of step with costs experienced in other developed countries. High direct costs and the indirect costs of delays through industrial disputes are both a cause for concern in Australia. The reasons for high shore-based shipping costs are complex involving the interactions of managerial, administrative, operational, institutional, industrial and other factors. The Minister for Transport, in response to the concerns expressed about shore-based shipping costs, asked the BTE to conduct a seminar to examine the issues involved and to explore possible solutions. The seminar, which was held in June 1984, broke new ground for the BTE. Unlike previous workshops and conferences organised by the BTE, it focussed on a particular problem. In doing so it brought together representatives of all those groups with a direct interest in the issues, such as governments, private companies (both operators and users of shore-based facilities) and unions (12).

The seminar was considered a considerable success and was distinguished by a strong consensus on the need for action to address the high cost of shore-based shipping activities. The main outcome was the formation of an industry task force to examine, in greater detail, the issues identified at the seminar and advise the government on a program of action. The Director of the BTE is a member of this task force and the BTE provides a supporting role by providing the task force with investigative and research support. This is a new role for the BTE. Normally the BTE's work is geared to the needs of government and usually provides its advice by way of specific reports. In this particular project the BTE is responding to the needs of what is essentially an industry task force.

The terms of reference provided to the task force are:

- . In the light of widespread consensus that there is a need to determine measures which would maximise the efficiency of the land-based elements of the movement of cargoes by sea, the task force is to
 - examine the overall efficiency of the movement of cargo between point of despatch/receipt and shiploading/unloading
 - identify in consultation with the industry those factors which inhibit maximum operational efficiency of the total system
 - determine practical measures which would increase operational efficiency and lower the cost of land-based elements of the movement of cargo by sea.

- . The task force should, in the first instance, focus its attention on the movement of cargo in containers and associated issues, before considering issues associated with the movement of general and bulk cargoes.
- . The task force should ensure that those involved in the industry, including shipowners, users, labour and terminal operators, are consulted and have an opportunity to contribute to the work of the task force.
- . The task force should arrange its work program so as to provide an interim report, covering those issues it has identified as priority tasks and any initial recommendations, by December 1984 and complete its work by December 1985 (now June 1986).

The support the BTE has so far given the task force includes two main streams: the provision of background data including some analysis, and some investigative work on costs and some activity case studies. The work on costs has examined and made estimates of the cost of each step along the chain leading to and from the ship. These costs include the transactions and documentation costs that are so much a part of maritime activity. The case studies involve detailed examination of the procedures involved in getting cargo to and from ships and covered large and small importing and exporting companies.

Much of the concern about shore-based shipping costs as reflected in the terms of reference refers to non-bulk commodities and more specifically to containers. To ensure that this did not unduly bias the consideration of the issues, the task force asked the BTE to prepare a paper examining bulk commodities.

The shore-based shipping costs exercise illustrates many of the characteristics of more recent BTE work. It focusses on a national multi-modal problem involving both industry and a number of levels of government. Solutions to the problem are likely to be based on policy and institutional initiatives rather than fiscal or economic factors.

Conclusion

The paper has discussed, in general terms, how the BTE has evolved and how it has responded to the needs of the Commonwealth Government which funds it. Three case studies have been presented which give, in more detail, how the BTE has gone about performing the functions allocated to it. Overall the BTE, and organisations like it, is ultimately judged on how satisfied its clients are with its performance. The BTE's clients, as well as the Commonwealth government, includes, state and local governments, taxpayers in general, professional peers and its staff.

The government, in assessing a research organisation, is primarily interested in the quality of the advice it receives. Is the advice useful? Does the advice assist the government in making decisions on policy development or expenditure priorities? These questions are always important considerations for research organisations like the BTE. It is always important because if the material provided to government does not consistently address issues of relevance to Ministers, the organisation will quickly lose influence and credibility.

Professional peers of the staff of a research organisation also judge the quality of the organisation's work. It is important for the reputation of the organisation that its work be of a high standard and able to withstand

scrutiny by professional peers. Its research must also be seen to be independent and impartial. This is essential, not only for the credibility of the organisation but also to allow the government to make proper use of the advice. Work perceived as independent and impartial carries more weight both in public discussion and in decision making. Work which is not seen to be the result of independent analysis may not be perceived as either objective or professionally adequate. Thus, professional credibility is vitally important to the value of the research organisation to the government and ultimately to the survival of the organisation itself.

The staff of a research organisation are often its strongest critics. Researchers need a stimulating environment to produce their best results. It is a challenge to management to create an environment which allows individual ideas to be encouraged and to flourish within the constraints imposed by the need to be sensitive to the requirements of policy development by the government. Staff need to be able to achieve recognition for their work by their professional peers.

Management of a research organisation must be aware of these issues. Reconciling these different pressures is the challenge faced by management. It must be able to reconcile the need for higher level advice presented in clear and rather broad terms with the desire of professional staff to undertake detailed analyses. It must protect the credibility of the organisation by ensuring that it does not imbed any political value judgements in its work but at the same time it must provide a satisfying environment for its staff who, understandably, want their work to be influential in the decision making process. Management must also ensure that the organisation has professional credibility among its peers.

Finally, the taxpayers generally take an interest in the functioning of research organisations. In an era when governments are expected to constrain expenditure, taxpayers are interested in getting value for money. They will want to know if the advice the organisation is giving government is worth the resources it uses. They will also want to be confident the organisation is sensitive to issues of concern to the public. Generally it is only members of the public who have a vested interest in a specific topic being researched by the organisation that will express concerns. The BTE takes account of this potential bias by ensuring relevant organisations are consulted during its investigations.

The paper has concentrated on the relationship between the BTE and the Commonwealth Government. However, the other issues discussed are also important if the BTE and organisations like it are to remain relevant and credible. The fact that the BTE still exists and enjoys a good reputation is evidence that it has generally been successful in satisfying its clients while at the same time maintaining its professional integrity.

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