

External Earnings Targets Policy (CSIRO, ANSTO and AIMS)

Introduction

The AGC comprises nine societies and associations, represents most of the professional geoscientists in Australia, and has a total membership of about 8000 people. Our main aim is to promote the geosciences, in the best interests of both our constituent organisations and the Australian nation as a whole. Consequently, our comments relate more to the operations of CSIRO, which has a significant resources and energy research program, than to the other agencies being reviewed.

We are hopeful that the outcomes of this review will also be applicable to other Commonwealth agencies that undertake research, and have links to Australian industry. We particularly have in mind Geoscience Australia, The Bureau of Rural Sciences, the Australian Bureau of Agriculture and Resource Economics (ABARE) and the Bureau of Meteorology and the Australian Government Analytical Laboratories (AGAL). We believe that the general principles underpinning external earnings policies should be applicable to all Commonwealth agencies undertaking scientific research.

External Earnings: general principles

The AGC believes that the policy of requiring scientific research agencies to earn part of their income from external sources depends primarily on the core roles and functions of each agency. In other words, if an agency has a role to work with industry to develop opportunities in that industry, then it is clear that industry should contribute funds accordingly.

We would encourage research agencies to work with industry on research projects. If managed properly, these arrangements should benefit the research agency, because they provide strong motivation for that agency to be relevant to the needs of industry, and also industry, because they should encourage investment by industry in R & D to develop market share.

On the other hand if the responsibility of the agency is primarily to deliver information to society as a whole, then clearly most of the operating funds should be provided from public appropriations. In this situation, having to generate external earnings will detract from the core functions of that agency.

Consequently, if funding is cut from the public good programs, this forces the agency to increase its external earnings, whether or not there is a formal target. The net result is a distortion of the functions of the research agency so as to diminish the pursuit of longer-term research programs that are strategically important for the country. In other words, the research programs will be aligned to achieving external earnings for the survival of the organisation, rather than focussing on longer-term programs designed for the national good.

We see the need for a spectrum of different levels of external earnings across the Commonwealth research agencies depending on the role and functions of each agency. If

an agency has a definite responsibility for long-term strategic research, then the public good part of these programs should not require external earnings for support.

We therefore recommend that: ***The level of external earnings should depend on the roles and functions of each individual agency. The longer-term public good programs should not be dependent on external funding (R1).***

CSIRO

Research activities

CSIRO is Australia's main research organisation. Its role is "to deliver great science and innovative solutions for industry, society and the environment". It has helped Australia's largest and most dynamic industries to grow and prosper. In the Exploration and Mining Sectors, CSIRO "undertakes strategic research in the Minerals and Energy Industry" to maintain "Australian Leadership in Global Exploration and Mining".

However, in recent years CSIRO's budget from government has gradually declined, when compared to the GDP, and it has to earn at least 30% of its budget from external sources. In the geoscience areas we are informed that this target is approximately 45%. However, this imposes a requirement at the research project level to generate over 60% of funds from external sources because of the need to fund the non-project areas of the organisation. This has resulted in a decline in the longer-term strategic research effort, a distorting effect on the entire budget caused by having to raise external earnings, and restrictions on research outputs being made available in the public domain.

The 1999-2000 Annual Report summarises the situation "*The decline in business investment in R&D over the past few years back to the early 1990 levels of 0.67 per cent of GDP, has made collaboration with Australian industry more difficult particularly in the mining related sectors. Continuing cost pressures on CSIRO for infrastructure and wages have resulted in a reduction of staff numbers by about 1 000 since 1990, placing further pressure on the ability to achieve the planned outputs.*"

We would not argue against external earnings *per se*. As stated above, the work between CSIRO and industry benefits both parties, and in the long-run produces flow-ons that benefit the whole country. However, what appears to have happened in recent years is that the better scientists have been deployed on the short-term tactical research to generate money and save jobs, rather than concentrating on the longer-term strategic research which the organisation is set up to do. Unfortunately, most of the industry funded research is of a short-term (<5 years) tactical nature and the results are often not available in the public domain.

The AGC considers this situation to be unsatisfactory, in terms of value for the taxpayer's dollar. Many of the important scientific advances are made over a 5-10 year time scale, whereas the short-term tactical research usually relies on established techniques. Examples of developments that needed more than five years application include the:

- Development of an airborne gravity system,

- Development of new age-dating methods for rocks,
- Investigations into modern submarine mineralising systems, and the
- Use of remote sensing techniques for mineral exploration.

The more an organisation is pressured to raise money, the less time it will have to focus on the big-picture challenges.

The optimum level of external earnings is difficult to assess and in the end usually comes down to the role and function of the organisation and a subjective judgement on what portion of its resources are allocated to longer-term strategic or short-term tactical research.

In CSIRO's situation the level of external earnings is one of its six formal Performance Indicators, and is currently set at 30%. We see no reason for this level being adopted and recommend that: ***The formal target for external earnings of 30% for CSIRO be abolished and a more flexible budgetary arrangement established (R2).***

We are concerned that, the level of external earnings is adopted as a Performance Indicator. To our knowledge the link between the level of external earnings and the effectiveness of an organisation in the context of delivering “innovative solutions for industry, society and the environment” and wealth and jobs for Australia has not been demonstrated. We therefore recommend that: ***The use of external earnings as a formal performance indicator should be abolished. Performance indicators should be based solely on the economic, social and environmental benefits to the community of the R & D outputs (R3).***

In fact, cost benefit analyses of public investment into R & D are few and far between. To provide better information on this issue we recommend. ***A cost benefit analysis of public investment into R & D Commonwealth agencies be commissioned to determine appropriate performance indicators and the value of the outputs from these agencies (R4).***

We believe that the results of industry-funded research carried out by CSIRO and other Commonwealth R & D agencies should be made public after a time period of <2 years. CSIRO operates for the overall benefit of the nation and is a public institution. Eventually, the results of its research should be made available in the public domain. A similar situation applies to the CRCs, where some of the findings may be tied up in IP that benefits the CRC or some of the partners, without it being made available in the public domain.

Products

Where external earnings are derived from the sale of products, we strongly support the findings contained in the Draft Report of the Productivity Commission on Cost Recovery. In particular, the following key Recommendations in that report:-

Recommendation 6.5:

“Information agencies should carefully define the boundaries of their core and non-core activities determined with reference to:

- *The agencies’ broad public policy objectives;*
- *The public good characteristics of the activity; and/or*
- *Any positive spillovers associated with the activity.”*

Recommendation 6.6:

“The core activities of information agencies (which may include some defined level of dissemination) should be wholly budget funded and not subject to cost recovery.”

Recommendation 6.6 has recently been implemented by Geoscience Australia with respect to the provision of geoscience information to encourage mineral and petroleum exploration. Until September this year much of this information was provided at prices set to meet external earnings targets. However, as a consequence, the key role of the agency, that of encouraging exploration was inhibited because many of the smaller explorers could not afford the basic data on which to base their exploration strategies. In the States/Northern Territory where the prices for data were significantly reduced, the net effect was an increase in exploration activity, which in the long term will, we believe, pay off handsomely in terms of generating national wealth.

And Recommendation 6.7:

“Non-core activities of information agencies should be charged at marginal (incremental) cost or, where relevant, at prices in keeping with competitive neutrality principles.”

It may be difficult to clearly define the boundary between core and non-core activities but we suggest that the basic principle behind this recommendation is sound. After all, government information agencies were generally established to provide public good services and products; activities, which may at present appear to be non-core could well be of general value in the future.

In the long run, the outputs from our main national research agencies contribute to the economic, social and environmental benefits of the community and our objective should be to maximize these benefits as best we can.

Recommendations

R1. The level of external earnings should depend on the roles and functions of each individual agency. The longer-term public good programs should not be dependent on external funding.

R2. The formal target for external earnings of 30% for CSIRO be abolished and a more flexible budgetary arrangement established.

R3. The use of external earnings as a formal performance indicator should be abolished. Performance indicators should be based solely on the economic, social and environmental benefits to the community of the R & D outputs.

R4. A cost benefit analysis of public investment into R & D Commonwealth agencies be commissioned to determine appropriate performance indicators and the value of the outputs from these agencies.

R5. Core activities of research/information agencies should be wholly budget funded and not subject to cost recovery, where these activities are in the public good. 'Non-core activities of information agencies should be charged at marginal (incremental) cost or, where relevant, at prices in keeping with competitive neutrality principles.'

R6. Non-core activities of information agencies should be charged at marginal (incremental) cost or, where relevant, at prices in keeping with competitive neutrality principles.