

Science restructuring raises serious issues

I read with interest in *New Zealand Science Review* [Vol 68 (2,) 2011] the above article originally written by Dr Peter Pockley in 1992. Being based in Australia, he made frequent reference to CSIRO in discussing the then current break-up of DSIR into ten Crown research institutes. I appreciate your reprinting it now at a time when mergers of the CRIs have been discussed.

In 1992, Dr Pockley focused, in part, on the costs of restructuring and the on-going administration of distinct institutes.

... I asked how much it will cost for the creation of separate boards, premises and administrations for the 10 Crown Research Institutes

If [a single organisation] had been structured in separate divisions or institutes along 'sectoral' lines similar to the CRIs, the organisation would have shared common services and existing buildings and avoided the costs of setting up separate CRIs.

Further, in a note appended to this reprint, Dr Pockley now writes:

... if the suggested amalgamation of CRIs into three 'mega' units is an improvement on the earlier, literal decimation of the DSIR, why not go the whole hog and re-create a single, wide-ranging national research organisation (like Australia's enduring CSIRO)...

We all share concerns about the overhead costs of running Crown-funded science, whether at the Ministry or institute level. However, it is important that assumptions made about cost structures are tested when they can be.

In this context I wish to point out that perusal of the 2009/10 Annual Reports of the present eight CRIs reveals they operated with proportions of staff categorised as 'Management and General Support' varying from 17% to 24%, with the overall average being 19%. These staff are differentiated from the majority of staff who are categorised as 'Research and Research Support', and so can be understood to be what scientists would refer to as 'administrative overheads'. While CRI sizes range from 317 to 824, with an overall total of 4127 staff, inspection reveals that there is no correlation ($R=0.025$) of administrative overheads with institutional size.

Following Dr Pockley's comparison with CSIRO, perusal of that organisation's Annual Report for 2009/10 reveals that the proportion of staff categorised as 'General Services, Administrative Support, and General Management' is also, perhaps remarkably, 19% of CSIRO's total 6680 staff.

It is important to note these comparable proportions of administrative effort. The proportionality would appear to apply to a much larger number of staff than in any CRI, and it supports the idea that the proportion of effort spent on administration is not necessarily smaller in a larger institution. It points to other factors, such as organisational culture, or perhaps geographical distribution, as being the determinants of the proportion of effort spent on administration.

Most importantly, it shows that for the CRIs there is no strong argument to create larger organisations solely on the basis of an assumed gain in administrative efficiency.

Arguments, if made at all, about mergers of CRIs or their size must therefore be based on other criteria. Campbell *et al.* [*McKinsey Quarterly*, June 2011], for example, propose the consideration of three questions to determine the merit for centralisation of management:

- (i) Is it a legal requirement, for example, in terms of financial reporting, or health and safety?
- (ii) Does it add significant value? For CRIs this could be financial value (for example, a 10% increase in retained earnings for investment in capital equipment) or scientific value (for example, opening of new science pathways for the benefit of New Zealand).
- (iii) Are the risks low, for example, of business rigidity, reduced motivation, bureaucratic hierarchy, and distraction?

Any restructuring of the science system should be considered under criteria such as these.

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