

R&D INQUIRY
Submission No. <u>18</u>

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21st August, 2002

The Inquiry Secretary
House of Representatives
Standing Committee on Science and Innovation
R1 Suite 116
Parliament House
Canberra ACT 2600

Please find following my submission regarding the terms of reference of the Standing Committee.

The R&D drivers in small and medium sized businesses

No comment as I have no experience in this area.

The needs of fast-growing companies

No comment as I have no experience in this area.

The considerations by which major international corporations site R&D investment

I have worked for three major publicly listed corporations, 2 UK owned (Reckitt and Colman, GlaxoSmithKline) and 1 US owned (Bristol-Myers Squibb) in R&D for eleven years. During this time I have worked both in Australia as part of a local / regional laboratory and overseas in R&D as the head of global research and development, hence I have seen and participated in the workings of R&D in Australia from both sides of the global fence. The industries represented by these international corporations range from well known and recognised household products, cosmetics and specialty foods to drugs and pharmaceuticals, and it is these products / industries that my submission specifically relates to. The comments contained herein are solely my own and do not reflect the position of any company with which I have previously been or am currently employed with.

In my experience the factors that influence placement of R&D investment can be broken down into four major categories:

1. Location / Communication

Key decision makers within multinational corporations have chosen to locate their research facilities either in the UK or the US to have them close to these large markets.

The rationale for this is due to the following:

- Major external R&D support businesses (e.g. material and packaging suppliers headquarters and production facilities) are also located in these countries (US / UK and Europe).
- Major internal R&D support functions (e.g. regulatory / medical / quality / legal) are centralised in these countries (US / UK / Europe)
- Proximity to the head office of the company is a key factor to enable quick communication and influence both to and from the R&D centre
- Proximity to major production centres of the company influences the placement of R&D units as there is greater interaction during technology transfer
- Tyranny of distance and time. Executives prefer to have the R&D facility in a country and a time zone that is quickly and easily accessible without the requirement of long-distance travel and out-of-hours video / telephone conferencing

2. Financial

In this era of publicly listed companies under pressure to produce increased earnings growth year on year there is the imperative of cost reduction by any means, leading to the mantras of "centralisation of functions", "shared services" and "critical mass". In reality this means that smaller R&D facilities in smaller markets are easy targets for closure, regardless of the excellence or efficiency of the units. This allows easy demonstration of "head count reduction" as a measure of financial acumen. The constant stream of acquisitions seen in industry only exacerbates the effect as R&D effort is seen to be duplicated and is one of the first functions to be "merged" and "centralised", leading to closure. This also leads to the "economies of scale" argument where if everything is concentrated in one place / area then costs can be brought down (bulk purchasing, less capital on the books etc.). In reality the marginal benefit obtained by this is offset by the increase in bureaucracy and administration that goes with having large facilities.

A further effect contributing to the closure of R&D in Australia is the current trend in corporate management to partition the world into "regions", where various R&D units are assigned regions to support both from a new product and business support point of view. In reality this means that Australia is always assigned the Asian region and therefore is judged on the rise and fall of the products in these markets. As many of these markets are volatile and also not well developed the financial contribution to the overall company is small (and in some instances negative) making a poor case to continue supporting an R&D facility for the region. Furthermore, the Asian region both commercially and technically is without exception poorly represented at either board or senior executive level in multinationals meaning the share of voice and ability to fight for the continued support of R&D within the region is low.

3. Strategic

Companies are searching more and more for that global "Superbrand" (e.g. Coca Cola) that will capture the maximum number of consumers in every market. Along with this search for the global brand holy grail comes the global formula principle. One look / taste / feel / sound / smell / experience no matter where you are. This leads to the belief that one laboratory produces the one product which is then disseminated to all four corners of the globe.

The commercial strategies of global corporations such as those I have worked in have become more and more fixed on the "globality" of the product in all aspects. Regional and local differences or requirements are thought of as inconsequential or problems that the local commercial businesses somehow have to influence or manage. There is therefore significant strategic pressure on reducing complexity within the R&D organisation leading to the marginalisation or closure of R&D units in small local markets. Australia is a perfect example of this case where R&D in the industries I have worked (with rare exceptions) has become a "technical support" or "business support" activity, or simply closed altogether. There is no scope or latitude to produce or develop novel products, processes or solutions to meet local consumer needs, and any basic research into the science behind the products is not permitted.

Recently there has also emerged the "Centres of Excellence" strategy where research and development is concentrated in major centres throughout the globe to concentrate on various products and materials. The theory is that these units have the critical mass, resource and latitude to explore not only the development of products for the global market, but to research the next innovation or technology that will provide the next global blockbuster product. Australia has not been selected (with one exception) in the corporations I have had experience in due to the lack of financial contribution of the markets that are supported and hence the lack of "push" at executive level to lobby for this region.

4. Subjective

The final influencing factors are those that fall into the “personal” and “historical” area.

The personal choice of corporate executives / board members responsible for the distribution of R&D resources around the globe remains a factor. Cultural differences that are part and parcel of having large, global corporations are, I believe, not well received, tolerated or understood. Both Australia and other countries within the Asian region which have previously had R&D facilities have been less well regarded due to cultural differences experienced by senior executives, both from a country and corporate point of view. The Australian attitude of “work to live” and “speak your mind” has, I believe, been an influencing factor in decisions made about the closure or marginalisation of R&D in Australia.

A related but yet distinctly separate Not Invented Here attitude also impacts negatively on R&D in Australia. There is in some parts of the UK and US a lack of respect for the scientific expertise in other countries / regions around the world. In Australia this has manifested itself in demands for information and effort from R&D facilities that are not expected of the central laboratory. In effect we are asked to justify the quality of our work far beyond what is expected from local requirements, and indeed beyond what is expected in the central laboratories in the UK or the US. The nett effect of this is to slow down the output of the laboratories in Australia as well as to highlight when any problems or errors are encountered – again making the R&D facility in Australia suffer in comparison and become an obvious target for closure.

The history of company growth through acquisitions has meant that major research facilities have been acquired in the UK and the US that are not easy to replace / relocate. In order to make the most of these facilities (financially and physically) work has been transferred from Australia to these major facilities, in essence helping to justify their existence at the expense of Australian R&D.

Answers to these questions:

What would be the economic benefit for Australia from a greater private sector investment in R&D?

Clearly greater private sector investment in R&D would lead to retention of talented / qualified people in Australia. This would lead to higher salaries, higher tax revenue, more innovation and more exportable technology, both from a pure research sense and in commercialisation of novel products and processes. Science would then be seen as a real career option in Australia.

What are the impediments to business investment in R&D?

The major impediments to business investment in R&D are economic and corporate. In order for R&D to reach a meaningful level in Australia it must be financially attractive to do so (or financially prescriptive not to). A change in corporate culture is also required where the myth of "complete globalisation" as the most effective way to achieve shareholder expectations and corporate objectives is openly challenged.

What steps need to be taken to better demonstrate the benefits of higher private sector investment in R&D?

The answer to this is complex and dependent upon the private sector industry being examined. For the industries within my experience a dramatic shift in government policy is required to entice research and development back into Australia. Not only must R&D tax concessions for corporations that operate business units within Australia be raised, but further innovative measures to provide incentives need to be put in place. These can range from the prescriptive (e.g. mandating that a minimum level of turnover of corporations operating within Australia be spent directly on Australian R&D), and the rewarding (e.g. companies that demonstrate a consistent level of Australian R&D funding are given tax advantages) to the collaborative (e.g. infrastructure to assist in global networking and research is made available at an attractive cost). There are obviously many other ideas and initiatives that can also be found. What is important is the first step of recognising the current trend and projected implications, and taking hard measures to reverse it.

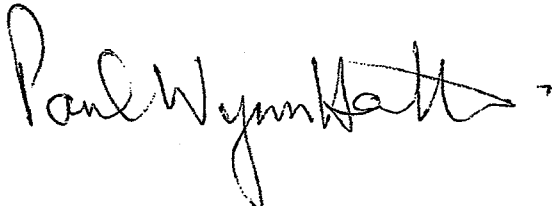
Summation:

In my opinion the state of research and development in basic consumer products industries as well as the more involved cosmetic, drug and pharmaceutical industries has gone beyond critical to a state where, given the current corporate strategies, there is little to no likelihood in the foreseeable future of this being performed in Australia.

The ramifications are that current Australian scientists will either change industries, careers or move overseas and not return, depriving both the economy and society of their expertise. There will also be a shortage of science qualified people in Australia in coming generations as there will neither be the enticement, infrastructure or role models for these future generations to aspire to.

I trust this submission will provide some points for consideration and provoke serious debate over the future strategy for retaining R&D within Australia. Should you require any further details or clarification on these points or further input please do not hesitate to contact me.

Yours Sincerely,



Dr. Paul Wynn-Hatton
August 21st, 2002

Postscript:

At the time of writing it has just been announced that the Research and Development division at GlaxoSmithKline Consumer Healthcare Australia will be closed down permanently by the end of January 2003. This means another nine permanent and four contract research and development professionals will also be searching for fewer positions in an ever shrinking field within Australia. After the announcement I requested details on the rationale for the closure to which the following reasons were given:

- R&D Organizational Effectiveness Strategy
- Leveraging Resources & Achieving Critical Mass
- Business Need and Financial Realities
- Headcount Targets