



Professor Edward Byrne AC
President and Vice-Chancellor
Office of the Vice-Chancellor

29th April, 2014

Senate Standing Committees on Economics
PO Box 6100
Parliament House
Canberra ACT 2600

economics.sen@aph.gov.au

Submission to the Inquiry into Australia's Innovation System

Dear Secretariat,

I am writing to contribute to the landmark inquiry into the Australian Innovation System. I have considerable knowledge of innovation systems in other parts of the world and experience in research university leadership both in the United Kingdom and Australia. After a period of President and Vice-Chancellor of Monash University I am returning to the United Kingdom for a few years as the President of King's College London. There will be many contributions about the importance of science to national life and the importance of a solid scientific education and a mathematical education in particular in the school system. Because of some personal knowledge I would like to confine my comments to a particular area not that this area is more important than others but because it is in the area that I have been working around for many many years.

Australia has superb research universities for a country of our size and considerable additional investment in CSIRO. We have produced a lot intellectual property ranging from basic discoveries to applied discoveries that are worthy of commercialisation. It is widely recognised however that we fall short in this area with a failure to develop innovation in this country into tangible wealth creation including job creation. There is a common view to which I subscribe that Australia must develop an increased presence in niche and clever industries to sustain our economy at its current level of affluence in the decades ahead.

It is clear therefore that the current ecology of university research as currently funded, CSIRO and other Government initiatives including CRCs is not achieving the level of new industry development that the country needs to be successful at the level it has in the past. How to remedy this? There are several strands to this. Firstly, the current level of research commitment by the Government must be maintained and every effort made to increase it. Intermittent funding of major national infrastructure projects such as the Synchrotron and the range of projects funded by the NCRIS schemes have a major deleterious impact. Medical research is extremely important for this country but the range of research projects funded under the ARC are at least if not more important to the success of the national economy.

Secondly, and as importantly, the ecology of taking research into the market place with successful clever industry and new jobs is just not working for the country as it needs to. We need to develop an economy that has aspects of the success of Israel and also the Scandinavian countries. A successful ecology will involve major international companies basing some of their discovery research in Australia and also a system which supports start-up companies in a range of areas including human and fiscal capital. I don't believe that we have been grappling with this successfully and feel it needs much more work in its own right. I feel this should be the basis of a major national taskforce drawing on high level expertise from overseas notably countries that have achieved success in this area.

As part of the theme developed above I think a new approach to Commonwealth Government funding of applied research development is essential. The Fraunhofer initiatives in Germany have now been extended to a number of other countries including the United Kingdom and Canada. These are wonderfully successful examples in this area that have had great outcomes. The basic Fraunhofer model involves one university with great strength in a particular area partnering with a particular company around a targeted series of objectives. A really great example is the advanced manufacturing facility recently developed by Western University in London Ontario which is starting to draw major research investments from US industry into Canada in a way that did not happen in the past. Another approach has been developed by the United Kingdom Government through the Catapult Programs. These involve a small number of initiatives drawing together a capacity across a range of universities and endeavouring to capture much of national capacity in given areas and partnering with a range of industrial partners around really broad themes. For a country like Australia this approach has much to commend it. I believe that a combination of the Feldenkrais and the Catapult approach could be very beneficial in our country. Notably this appears to be exactly the way the UK Government is moving.

I have chosen to make a personal submission around some areas that I feel very strongly about but recognise of course that the scope of the committee is a very broad one and that there are very many other areas that will need to be addressed. I would be happy to speak to you or to the committee generally about any of these issues. The views expressed are my own. Monash University will be submitting a formal submission in addition to my submission.

Yours sincerely,

Professor Ed Byrne AC

President and Vice-Chancellor