

Submission by the Economic Society of Australia

National Innovation and Science Agenda: Engagement and Impact Assessment

This submission responds to the Engagement and Impact Assessment Consultation Paper of the Australian Research Council's National Innovation and Science Agenda. The Society appreciates the extension of time to complete this submission.

The Economic Society of Australia was established in 1925 with the purpose of encouraging the study of economics and promoting discussion and debate of economic issues in Australia. The membership of the Society includes economists in a wide range of professions, including academia, business and public policy. The views in this submission are those of the Central Council of the Society, which incorporates all its Branches.

The questions posed in the discussion paper are answered seriatim.

Questions 1 and 2: Definitions of 'engagement' and 'impact' for the purpose of assessment

A key consideration from the Society's perspective is that the definitions of impact and engagement ought to be sufficiently broad to capture the contributions that theoretical and applied economics research have made to the Australian community and the diverse nature of the engagement of economic researchers with the wider community.

Breadth is needed to capture not only the often intangible nature of the impact of research in economics but also the fact that such impact may be indirect and that it may take years, or even decades, until a particular body of knowledge leads to a direct impact on society. For example, research in game theory in the late 1950s has provided some of the underpinning theoretical foundations of modern industrial organisation, which were heavily developed in the 1980s and 1990s, and which form the intellectual basis of many aspects of competition law and regulatory practices around the world and in Australia.

Accordingly, while the Society considers that both the UK REF or ARC definitions of impact and ATSE's definition of engagement are appropriate for the purpose of assessment, we would be very concerned with any definitions that put undue emphasis on knowledge transfer and commercialisation.

While such an approach may well be appropriate for engineering and scientific research that ultimately translates into goods and services that have largely private benefits (and therefore can generate a revenue stream that can be appropriated through commercialisation) the same does not, generally speaking, apply in economics, and especially not the major fields of economics that have their application in public policy.

Such an approach would largely exclude, for example, applied research directed towards evaluations of the impacts of different policies and tools aimed at increasing the effectiveness or productivity of government policies.

For example, opening the Australian economy in the 1980's and 1990's produced a large increase in national income and wellbeing by, among other things:

- floating the exchange rate;
- substantially removing tariffs and border protection;
- micro economic reforms in the public sector;
- competition reforms;
- labour market reforms; and
- expanding access to higher education through the Higher Education Contribution Scheme (HECS).

This reform agenda was underpinned by a very substantial body of economic theory and applied research. The impact of this research would not be included within a narrow definition of impact.

Current cases include the practical application of behavioural economics to a wide spectrum of public policy issues ranging from more effective organ donor policies to tax collections, and the substantive contributions of auction and market design theory to public procurement and the allocation of public resources such as the spectrum of frequency for mobile telecommunications, exploration licences for oil and gas, and the conservation auctions.

As recognised in the ARC's consultation paper, a narrow definition of impact and engagement would exclude research that generates substantial social benefits that may not be tangible or directly measurable. This also implies that the definitions of impact and engagement ought to be sufficiently broad to be compatible with both qualitative approaches to measurement that may be based on narrative explanations and more straightforward quantitative measures. The issue of measurement is revisited later in this submission.

Finally, we note that broader definitions of impact and research may be also preferred as research into societal impact of research is still in its early stages.¹ That is, there is no guidance, based either on theory or empirical evidence, to justify the selection of a particular narrow definition of impact.

Questions 3 - 6: Scope of Assessment

As identified by the Consultation paper, there are a number of issues that ought to be considered when defining the scope of the assessment, which are addressed in turn. The first issue is whether all University research is to be evaluated – as in the case of the ERA exercise – or whether a selective assessment, where Universities nominate the research with the 'most impact', is more appropriate.

As argued above, any definition of impact and engagement needs to be sufficiently broad to capture the nature of the engagement and the indirect impact (and often

¹ For a recent survey, see L. Bornmann (2013), "What Is Societal Impact of Research and How Can It Be Assessed? A Literature Survey," *Journal of the American Society for Information Science and Technology* 64(2), 217-233.

delayed over time) of applied and theoretical economics research on public policy and business and government practices.

This means that as practical matter, the scope of assessment in the areas of theoretical and applied economics cannot be comprehensive. That is, the assessment cannot involve, for example, providing a narrative about the impact of each piece of research produced by Universities. This is impractical for many reasons including the actual costs of doing so but most importantly because in many instances the impact will only be clear in a distant future.

Similarly, the nature of the engagement is not captured by simply using aggregate, comprehensive measures, such as research funding from industry or the number of 'research reports for an external body', which were both reported in EA 2015. Such approach would miss, for example, researchers in applied and theoretical economics who are members of government or business boards, chosen for their research expertise.

While these board appointments may not attract direct research funding or no reports have been produced, arguably they can demonstrate a high level of engagement between researchers and the wide community. However, one can immediately see that simply comparing the number of board memberships across different Universities may provide little information, by itself, about the level of engagement.

Engagement is also, in a number of instances, embodied in institutions within universities that apply economics in bodies of research that engage with, and contribute to, public policy. A partial list of such bodies includes:

- Melbourne Institute of Applied Economic and Social Research (Melbourne University)
- Centre for Applied Macroeconomics (ANU)
- National Institute of Labour Studies (Flinders University)
- Centre for Policy Studies (Victoria University)
- National Centre for Social and Economic Modelling (University of Canberra).

In summary, the Society believes that the scope of assessment should be selective rather than comprehensive so that Universities are allowed to put forward their 'most impactful' work or their 'most meaningful' engagements. This does not mean, for example, that case studies and exemplars cannot be supplemented by comprehensive information.

There is a range of possible measures of impact and engagement. The ARC may require Universities to provide, for example, comprehensive measures such as citations in regulatory proceedings or in public policy documents (such as Government Reports), submissions to public inquiries, mentions in parliamentary proceedings, number of board memberships, and the like. The ARC will need to assess the value of the additional information provided through more comprehensive measures against the cost to Universities of collecting it.

The ERA itself is comprehensive, providing a picture of the excellence of the research undertaken by a particular field. A selective process for measuring impact and engagement can then be used to highlight research that may or may not be considered excellent by scientific standards, but that it may have a substantive impact on society.

For example, it will be difficult to find work in computable general equilibrium (CGE) in the top journals in economics, which is a key, but not unique, measure of excellence of research in economics. However, CGE models are extensively used in policy making. Smith (2001), in an editorial in the British Medical Journal, compared research into apoptosis, which was considered to be excellent, but that had not yet made an impact on health, with research on the cost effectiveness of different incontinence pads, which is not considered to be of high value by the medical scientific community, but which has had a large impact.²

The Society notes there have been some evaluations (in particular by the Productivity Commission) of the economic benefits of some of the major economic policy changes listed earlier.

A second dimension of scope is who should be covered by the assessment. As the Consultation paper highlights, research impact can manifest itself through training of postgraduate students both through research higher degrees and professional Masters. This is particularly relevant for postgraduate economic degrees in which both curriculum and program structure are informed by cutting edge research and where students receive research training. As an example, the influence that the Australian-based research on productivity has had on society can be partly measured by the number of economists that undertake productivity related analysis at public institutions, such as the Productivity Commission, Federal and State Treasury departments, Commonwealth and state departments of health, education and social security and private organisations and so on.

That said, the Society does not consider a simple destination survey will suffice to measure the impact of research on training, and subsequently, on society. Here too a selective approach may be better with Universities asked to put their best cases for each discipline on how research has affected society through training.

Question 7

Key challenges for assessing engagement and impact

Assessment is complicated particularly in economics by long lags in effects and complex interaction effects when judging outcomes. There is an extensive literature in economics in evaluating the impacts of public policy programs that has some relevance in evaluating the impact of specific applications of some applied economic insights in particular context.

In many cases these are not necessarily helpful in judging the impacts of big ideas, such as opening the Australian economy in 1980's by floating the exchange rate and phasing down border protection. Another example is the reforms in competition policy in the implementation of the Hilmer Report. These complex examples require a more sophisticated and balanced approach to identify contributions from applied economic research (and theory, such as market design) to the overall outcomes. In both of these examples economic research and theory played a significant role, as did engagement between the public and private sectors.

² Smith, R. (2001), "Measuring the social impact of research." British Medical Journal, 323, p. 528

Questions 8 and 9

Attribute specific impacts to specific research

What level of granularity and classification

Rarely have research economists or econometricians patented their discoveries: rather, they published them so as to encourage their wider adoption and consideration. Often the person who has the most impact on public policy is not the 'discoverer' or originator of the idea, but another university economist or public servant or group that can 'sell' the policy change. So the approach to attributing specific impacts to specific research may need to start with the public policy change, attribute it to a person or group, and then investigate to which researcher or researchers that person or group gives credit.

Attribution of specific effects to specific research may be possible and useful in particular instances such as the application of behavioural economics in particular circumstances where the outcomes are measurable. Much application of new or improved applied economics to public policy does not lend itself to such approaches and detailed disaggregation is neither helpful nor accurate.

The Society has no views on the level of granularity other than to apply common sense.

Questions 10 and 11

Timeframes for engagement activities

Timeframes for impact activities

For economics the timeframes for engagement and impact in general should be long. It took decades for an accumulating body of applied and theoretical work on tariff and border protection to achieve the commitment to phased tariff and border protection reduction in the Australian economy in 1988, and more decades until the full benefit was achieved. This is a big idea with a very large impact over a very long time.

The research program at the Melbourne Institute for Applied Economic and Social Research (MI) – such as the Household Income and Labour Dynamics Australia (HILDA) – is an instance of a very long commitment to engagement by Melbourne University with some notable impacts on public policy and policy thinking. The most recent wave of HILDA has, for example provided important new evidence on trends in home ownership. Other universities have established broadly similar groups, though MI is the largest and longest established.

An intermediate size idea is the development and application of income contingent loans as a means of increasing access to higher education and funding additional university places. In this case the relevant timeframe is shorter – possibly of the order of a decade having regard to the full pipeline impact on increased student numbers.

On the other hand, specific applications of behavioural economics may have generated impacts in relatively short timeframes of a year or more.

In short, a timeframe of 15 years may be reasonable for much of economic research while allowing for the possibility that some bodies of research may take longer to have an impact.

Question 12

Balancing reporting burden with robust requirements for data collection and verification

The Society has no particular view on this question.

Questions 13 and 14

Manage interdisciplinary differences in research engagement and impact

Measures or approaches to evaluation used in assessment to account for interdisciplinary and multidisciplinary engagement and impacts

The Society has no particular views on this.

Question 15

Types of engagement measures

The Society suggests a number of measures might be considered, including:

- Funding from public policy bodies such as government departments and agencies
- Exchange arrangements between university and public policy agencies
- Cross appointments between universities and government agencies and private groups
- Joint projects among (for example) government agencies, private organisations (eg consulting groups) and universities. An example is the Centre for Market Design which is a joint activity between the Commonwealth and Victorian Treasuries and Melbourne University.

Question 16

Impact assessment

The Society notes the Productivity Commission has made estimates of the impacts of a number of areas of public policies. Citation of economic research in public inquiries may be another measure.