

## **IRU Submission: The Inclusion of ERA in the SRE Funding Allocation Model**

The inclusion of the outcomes of the Excellence in Research for Australia (ERA) in the funding model for the Sustainable Research Excellence (SRE) program is set to be the first of many funding uses of the ERA ratings. It raises general questions about the best relationship between ERA and the Government research funding programs as well as the specific issues relating to the SRE funding model.

In this response the IRU:

- considers the nature of the relationship between the SRE and ERA;
- argues the need for transparency in the actual allocation of SRE (and other Government funding programs) such that the main input data and the application of the final formulae and any adjustments are made public;
- addresses the particular questions relating to the SRE funding allocation model; and
- sets out the IRU model for SRE funding.

### **Overview issues**

#### ***The relationship between the SRE and ERA***

The Department of Innovation, Industry Science and Training website states that “The Sustainable Research Excellence in Universities (SRE) initiative addresses the gap in funding for the indirect costs of university research supported by Australian competitive grants”<sup>1</sup>. The consultation paper (p3) places a broader frame around this purpose to indicate that SRE should support and build research excellence and secure the longer term sustainability of research.

The remainder of the consultation paper then endeavours to balance what are two distinct focal points:

- meeting indirect costs of Australian competitive grants (ACG); and
- and encouraging and supporting excellence.

The consultation forums confirmed the challenge of balancing these two.

ERA 2010 provides a guide to each university’s overall excellence by field. ERA 2012 will show the direction of change. If ERA is used solely to rewards those with particularly high levels of world standard results it risks inhibiting the capacity of other university to strengthen and develop areas with world class potential. The potential for ERA to guide Government in strengthening overall research output and excellence would be lost.

The IRU’s guiding focus is that SRE relates to the ACG, grants allocated according to the individual excellence of the project proposals. Those grants tend to align with areas that received world class ERA ratings.

---

<sup>1</sup><http://www.innovation.gov.au/RESEARCH/RESEARCHBLOCKGRANTS/Pages/SustainableResearchExcellence.aspx>

It is evident that universities that win relatively smaller amounts of ACG, but over \$2.5 million, align with those with lower overall ERA ratings (expressed in any of a number of ways). The risk of the Ei factor is that those universities face receiving less SRE for additional ACG income than more successful universities, creating a barrier to further ACG success, rather than encouraging it.

Equally, some areas of research with close to uniformly modest outcomes, for example education, could be downplayed across the sector, despite being a major professional area, if it appears easier to let an area shrink below the ERA thresholds than to raise its standard. It is important to learn from the English example, where allocating funding with a heavy weighting towards the very highest RAE ratings led to universities pulling back from research and often teaching in many valuable areas.

### ***Transparency and accountability***

To meet the principles (consultation paper p3) of transparency and accountability the basis for the calculation of the SRE should be public, just as it is for the calculation of RIBG, RTS and JRE research grants. The arrangements for universities to provide data that could contribute to the SRE funding model – the transparent costing data and the details of research outputs and income by field of research used for ERA – restrict their public release and indeed transmission of ERA data between ARC and DIISR.

The IRU supports release of this information sufficient to make the SRE process transparent:

- release of the estimated indirect expenditure per dollar of research income from the Transparent Costing (TC) exercise;
- the allocation of universities to the TC factors of 1 through to 1.2;
- research outputs and/or income by field of research as provided for ERA 2010 if used to create the Ei factor; and
- the allocation of universities to the Ei factor.

There should also be much more transparency about the thresholds that drive the ERA ratings, to give universities more scope to assess the potential for improvement field by field.

## **The SRE funding allocation model**

### ***The IRU approach***

The consultation paper sets out the major aspects of how the SRE funding model could be developed. The base position is that a university's share of ACG will be adjusted by the transparent costing outcomes (TC) and by the ERA ratings (Ei) to determine the university's share of the third tranche of the SRE funds.

The various questions the consultation paper sets interact. To focus the IRU comments they are guided by two points.

First, we should concentrate on the final point of the model.

The model requires an Ei factor that will be applied to each university's ACG proportion. The range of outcomes for the factor cannot be so large that it becomes the dominant factor in the allocation not the ACG proportion. The TC factor is a useful example. The TC results are scaled to a range of 1 to 1.2, based on the quartile in which the university falls. The Ei factor should likewise be scaled to a similar range as TC. That would ensure that both factors have an impact on the distribution but that the ACG proportion remains primary.

With that in mind, the various permutations possible in the design of the Ei factor will only be important where they alter to a major degree the relative positioning of universities. If they do not, the particular choice matters less.

Second, the IRU endorses the principles of simplicity and fitness for purpose. These dictate that where the various options produce similar results we should prefer the least complex of them. Both sets of data, TC and ERA 2010, are new and have weaknesses. Overly precise application of them would strain the fitness of the factor for the use.

#### ***Q1: Relative balance between cost and excellence***

The IRU considers that the two factors used to adjust the ACG proportion should have approximately the same weighting. This will recognise both of the intended outcomes of influencing the allocation by both evidence of actual indirect costs and the overall research excellence of the university.

#### ***Q2. Two pools or a single line formula***

The IRU supports an additive approach where by the ACG proportion is adjusted distinctly for each of TC and Ei and the two results combined. The two pools approach is a simple way to express this.

The additive approach allows universities and Government to see clearly what impact each factor has. To multiply the ACG proportion by both factors both complicates understanding of the result and encourages a greater spread of results.

The Diagram on p7 is not complete. Once the ACG share is multiplied by a modifier the result needs to be moderated to produce 100%. For example, to multiply the ACG shares (which total 100%) by the TC factor from 1 to 1.2 will produce an outcome greater than 100. All results then need to be scaled back to produce an outcome equal to 100%.

#### ***Q3. Different eligibility thresholds for different pools***

The IRU supports continuation of the \$2.5 million threshold for allocation of the third SRE pool.

The paper does not explore the continued rationale for the three SRE pools. The first provides some funds using the same approach as RIBG. The second in effect allocates the same amount to all universities with ACG over \$2.5 million, providing a proportionately greater amount for those with lower ACG revenue.

It would complicate the scheme even further to create two eligibility points for the third pool. Hence The TC and Ei factors should be used for ACG income beyond \$2.5 million.

#### ***Q4. Which ERA ratings should be applied***

The IRU supports the assumption of the consultations that the ERA ratings at the four digit level should be the basis for the Ei factor.

### ***Q5: Should weightings be applied to ERA ratings when creating an ERA index***

The weightings for the ERA ratings is the Government’s decision based on its final judgement on the balance of encouraging:

- research of at least international standard, hence emphasising achievement of a 3 rating; and
- world leading research, hence weighting 5s and then 4s more strongly than 3s.

The IRU supports giving no rating to research rated at 1 and 2. Research in fields that were not rated should not be considered and excluded from the denominator of total research outputs or income.

During the consultations there was some support for an even weighting of ratings of 3 and above. This has some attraction for the IRU in terms of simplicity. However, we consider that there does need to be a formal incentive to push research beyond the 3 rating and to acknowledge where it occurs. Doing so is important for sending clear, positive messages to academic staff who tend not to follow the fine points of allocation models.

On this basis the IRU preferred weighting system is linear model 2 which weights ratings of 3, 4, and 5 at 3, 4, 5 respectively. This emphasises that achieving a 3 rating is critical for consideration, and then acknowledges the value of achievements beyond that but to a lesser degree than achieving the world class 3 rating level.

The IRU position is based on the assumption that the final scores will be scaled to a reasonable outcome.

### ***Q6. Applying a volume measure – choosing a model***

The IRU does not consider a volume measure is needed beyond that provided by the university’s share of ACG income. It provides the base volume-share which is to be amended - but not transformed - by a cost factor and excellence factor. Hence, the IRU proposes that each ERA rating be weighted, the weightings added and divided by the number of FoRs which were rated. Table one provides a simple example assuming only six rated FoRs for the university.

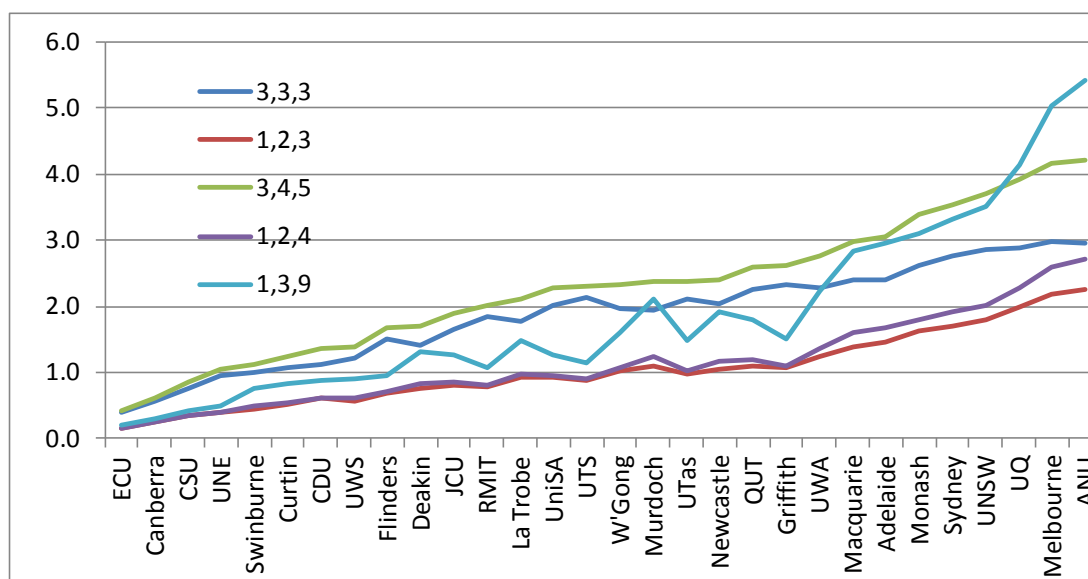
Chart One applies the model to all universities for all FoRs using the different ERA weightings listed in the discussion paper. It shows that there is little difference in the order of universities across the different weighting options, other than the extreme of stepwise 2 with its weighting of 9 for a 5 rating. The range of scores depends on the weight for a 5 rating (which sets the maximum possible score should a university be rated 5 for all rated fields).

The IRU approach reduces the incentive for tactical placement of researchers and outputs in ERA submissions. As ERA is used to allocate funds it changes from an assessment of research outputs that is informative to a funding tool where the informative value becomes secondary. This cannot be avoided but it is important to reduce the need for funding outcomes to distort the information provided.

***Table One***

<b>FoR</b>	<b>ERA rating (A)</b>	<b>Ei score (B)</b>	<b>Institution score (B/number of rated FoRs)</b>
1000	3	3	
2000	4	4	
3000	3	3	
4000	5	5	
2 Other rated FoRs	< 3	0	
<b>Total</b>		<b>15</b>	<b>2.5</b>

**Chart One**



A variant would divide by the number of FoRs rated at 3 or more only, on the basis that it is in these areas that the ACG income is overwhelmingly concentrated. It would constrain the range of results but give a higher ranking to universities with some highly rated fields balanced with a large number of fields rated below 3. It would also remove incentives to push important, but low rated, areas below the ERA threshold rather than strengthen them.

The IRU method is open to the charge that it would disadvantage a university with much of its research concentrated in some high scoring fields with much smaller amounts in a large number of other rated fields. In theory this is correct. In practice, Chart One suggests an order that fits with expectations. For simplicity and fitness for purpose the approach works.

In terms of the relative value of the external and internal moderators as set out in the consultation paper, the debates through the consultations failed to convince that their application would significantly alter the distribution of SRE funding over the simple model the IRU proposes.

It is apparent from the consultations that the Department has a strong interest in the internal model, using research outputs as the base.

The IRU agrees that this approach is the best of the various models in the discussion paper by adjusting by the research outputs that were the major input to the ERA ratings. However, using research outputs to compare fields across FoRs is spurious precision. There are well known disciplinary differences in the likely number of research outputs from leading researchers and moderate researchers. The model from the discussion paper ignores this and hence advantages fields that tend to a higher annual research output.

It is not clear why the paper did not discuss use of ACG income by field as the basis for a volume adjustment, whether internal or external, since this would directly join ERA and ACG, the focus for the SRE.

It makes little difference. The IRU's opposition to the secondary volume measure is that there is no evidence that it would significantly improve the outcome and that it encourages higher levels of tactical placement of researchers and outputs in ERA submissions than would otherwise be the case. Should the preferred model for the next stage of consultations include a volume measure the IRU would expect it to be supported with clear evidence that it adds significant value to final result.

### ***Summary of IRU approach***

- Choose options that are simple, avoiding complex models which cannot demonstrate a significant improvement to the allocative outcome.
- Scale both TC and Ei to a range similar to the current TC range of 1 to 1.2 to ensure primacy of each university's share of ACG in the model.
- Use an additive calculation whereby  $ACG\ share * TC$  plus  $ACG\ share * Ei$  provides the basis for determining each university's share of the third SRE pool.
- Balance TC to Ei 50:50, with scope for Ei to be up to 60%.
- Eligibility for the third SRE pool remains annual ACG of over \$2.5 million.
- Ei weightings of 3 for a rating of 3, 4 for a rating of 4 and 5 for a rating of 5.
- There is no need for a secondary volume measure since it would not significantly change the outcome and would encourage additional gaming of the ERA submissions.

28 September 2011