

A note of the roundtable discussion 'The future of the Research UK Performance Indicators for Higher Education'

Discussions held on Monday, 7 September 2015 at The Hotel Russell, London. A list of attendees participating in the discussions is provided at Appendix 1.

1. The roundtable discussions described here have taken place in the context of outcomes and recommendations which have followed a 2013 fundamental review of the UK Performance Indicators (UKPIs) for higher education (HE). This context and background is described further in a paper circulated to delegates in advance of the roundtable and available at Appendix 2. It resulted in the discontinuation of the former set of research UKPIs.
2. The UK Performance Indicators Steering Group (UKPISG) have acknowledged that in order to develop new UKPIs in the area of research, the UKPISG needs to develop an enhanced understanding of current interests and priorities relating to research measurement.
3. Fundamentally, therefore, the intention for this roundtable discussion was to canvass as many priorities and possibilities for measuring research activities within the UKPIs as possible. The discussions were framed within the broad question of: 'What are the purposes, priorities and policies that it is now appropriate or necessary for a set of research UKPIs to serve?'
4. If new UKPIs in this area are to be developed then it is important that the UKPISG are able to gain a good understanding of the issues, and to then subsequently identify those that might be both important and appropriate to measure in UK PIs. To this end, the UKPISG were seeking to receive advice on a number of topics and some specific questions were posed to the expert group.
5. The roundtable discussions took the form of a plenary session with three invited speakers to provide stimulus for its deliberations. This was followed by smaller group discussions which fed back into a plenary session dedicated to teasing out possible future indicators for further consideration.

Discussion points

Context and use of research UKPIs

6. It was apparent from discussions that there was a general aspiration for any new Research UKPIs to achieve greater visibility than their predecessors in order to fulfil their potential for usefulness. Delegates highlighted a belief that existing measures of research activity provided relatively good coverage in terms of institutional uses of information in this area. Wider uses of policy makers, funders and other stakeholders were not so well served by the information currently available.
7. Delegates felt that development of new research UKPIs provided an opportunity to set best practice, and to capitalise on the principles and influence of UKPI measures. Better communication and organisation of existing information in this area was considered to be a wider benefit of UKPISG's development work. Delegates noted a significant potential for the sector and its stakeholders to be making 'smarter' use of the measures and information already available, and indicated that undertaking a mapping exercise of the existing statistics, collections and reporting would be of particular assistance.

8. The importance of understanding the long term policy drivers around research activities was highlighted, as well as the arguments that policy makers might want to make in this regard. These drivers were thought to be excellence and impact of research outputs, the diversity of the research base and environment, undertaking of research in collaborative arrangements, the openness and accessibility of research outputs, and the distribution of research activities across the UK. In this context, an articulation of the purposes that research UKPIs are intended to serve was considered helpful.

9. Delegates highlighted two particular considerations in the context of the 'nature' of modern research. Firstly, that development of UKPIs needed to acknowledge that the research area is less confined than other topics measured in UKPIs. It was considered that the collaborative nature of modern research means that we may need to look beyond just the HE sector in terms of research performance measurement. It may be helpful for any measures developed to differentiate or acknowledge research that has been undertaken collaboratively across multiple HEIs, both within the UK and internationally, for example. Or research undertaken with joint authorship across industrial or research institute partners.

10. Secondly, and building somewhat on the former, it was felt that UKPI measures developed needed to be relevant to international audiences. The RCUK set of common questions used within Researchfish; statistics produced by the Organisation for Economic Co-operation and Development (OECD), and the EU's innovation score card were all felt to be examples of sources either facilitating or utilising international comparators relating to research activities. Alignment with this priority was felt to offer the potential for achieving greater visibility, usefulness and impact with a set of new research UKPIs.

Generic concerns affecting any research UKPIs

11. The discussions highlighted a desire for the development of a comprehensive but manageable 'basket' of UKPI measures. There was no clear agreement about what 'comprehensive and manageable' would look like, although some favoured half a dozen research 'topics' each being measured by at most 3 indicators. Others suggested 1 or 2 indicators in a smaller number of areas. However, it was determined that some parts of this basket should likely be published at different frequencies to others. Delegates expressed a concern regarding the ability of any measures in this area to overcome a (sometimes significant) time lag in terms of their publication and relevance. As such, it was considered that the quality, utility and availability of the information provided should override the desire for neatness in publication schedules.

12. Delegates also noted the potential behavioural impacts of research performance measurement. While it is considered that the risk of manipulation of UKPI measures was lower than some other measures, on account of their having no direct monetary value, exercises such as the REF had already highlighted the possibility of publications being chosen on a selective basis, for example.

13. A further generic concern was that indicators would be sufficiently sensitive to subject differentials and other biases. At an institution-level, it was considered that biased results could be generated for small or specialist institutions, or for large but not especially research-intensive institutions. At a discipline level, it was considered that arts and humanities subjects, for example, presented a particular challenge in terms of quantifying the volume of their research activities in a meaningful way (in particular, a true measure of volume was difficult because their research publications weren't all captured in databases such as Scopus or PubMed). While the

expert group acknowledged that it would not be possible to avoid all such biases, it was emphasised that care needed to be taken to ensure that any indicators developed are not all biased in the same direction. Clear communication of the direction of the bias was also considered important in the publication of those measures.

14. A desire to make use of existing data sources, rather than to introduce new data collections, was reiterated by delegates on several occasions. The opportunity for UKPISG to be at the forefront of work to encourage making ‘smarter’ use of the measures and information already available was also reinforced. In a similar vein, delegates considered that duplicating existing processes and measures was not helpful. For example, while the timescales and time lags of the REF, as well as the potential selectivity of submissions posed a number of issues, the expert review included within it was felt able to overcome many of the limitations of citation-based measures. It being discipline-level in nature and its employment of a broad definition of impact and performance were felt to be further strengths. While use of REF-based measures within UKPIs was welcomed, it was noted that it could not be considered in isolation and nor could it replace a comprehensive but manageable ‘basket’ of metrics, and vice versa.

15. The expert group considered the Snowball Metrics project in some depth. The project was reported to take a bottom up approach, whereby the partner institutions all agreed the set of metrics and/or methodologies to endorse, such that individual partners could choose the ‘recipe’ of metrics that suited their needs. It was acknowledged that the costs of UKPIs adopting a Snowball Metrics type of model – both monetary and in terms of resource/burden – would need particular consideration, especially with regard to non-research-intensive institutions. While other concerns were noted about the applicability of the approach if it were to be extended across a broader group of institutions, the aspiration of facilitating a trusted comparison of metrics on a robust standard was felt to be one that was compatible with UKPIs’ principles. In particular, the ambition for the use of standard definitions in the production of measures that are comparable and benchmarked was in alignment with the principles of UKPIs. An articulation of the overlaps between the purposes of research UKPIs and the approach of the Snowball Metrics project was suggested as a useful next step.

Potential measures for inclusion within research UKPIs

Citation-based measures

16. The strengths and weaknesses of citation-based measures were explored by the group in some detail. It was considered that there were a number of established measures already in use globally and that they were therefore helpful with regards to facilitating international comparisons and their existing availability. Delegates considered that these measures were of use and interest at each of sector, institution and subject levels (albeit with lesser merit for the arts, humanities and social sciences subject areas), but that they should be avoided in UKPIs if they were just seeking to provide a volume measure for its own sake. It was felt that combining a citation-based measure with a per capita-based measure would strike an appropriate balance in terms of utility and interpretation within UKPIs.

17. Retention of output or volume measures that facilitated the identification of relative research power (between institutions and nations, and internationally) was felt to be important, and it was reported that field normalised citations were widely acknowledged as the more robust option relative to other citation-based measures. However, unusual citation activity was not unusual and it was suggested that some form of a priori filter or cap on ‘anomalous’ papers might

be required (for example, the Times Higher Education league tables won't include papers with more than 1,000 authors in their upcoming version). In addition, a metric considering (for example) the proportion of papers in the top 5 per cent might deal quite well with (typically methodological) papers that make up a long tail of the citation distribution and which are difficult to deal with.

Measures of postgraduate research student success

18. Delegates felt that it would be key for UKPIs to include measures of postgraduate research student completion or success. Such measures would be able to provide an indication of sustainability and strength of the research base. If it were possible to also report on PGR student success relative to public investment in PGR provision it was considered that this would have particular utility. Concerns were raised, however, regarding the ability of such measures to reflect collaborative arrangements for the delivery of PGR provision.

Research impact

19. While delegates considered that there was little value in duplicating processes and approaches employed by the REF for the purposes of UKPIs, it was suggested that UKPISG maintain a watching brief over the development of approaches to evaluating impact by organisations such as NESTA, and approaches to the collection and curation of alternative forms of metrics such as those by Altmetrics. Timeliness of research impact assessment was acknowledged, but it was considered that REF was a robust and effective source of this information. While use of REF-based measures within UKPIs was welcomed, it was noted that it could not be considered in isolation and nor could it replace a comprehensive 'basket' of metrics, and vice versa.

Research efficiency or productivity

20. Delegates provided a very clear steer that measures examining research grant applications should not be included within UKPIs on the basis that such measures were very open to misuse and had significant potential to incentivise undesirable behaviours. Research grant success rates were felt to be a preferable measure already used by institutions and providing opportunities for benchmarked indicators. Such measures were considered to be one possibility with regards to measurement of research productivity.

21. Delegates noted potential overlaps with work being taken forward by UUK, BIS and HEFCE in the area of efficiency metrics, and that consideration of research productivity would need to address an assessment of the efficiency of research processes.

Research openness, integrity and innovation

22. The expert group concurred that each of: research openness (in terms of the accessibility of research outputs to industry, the public and so on, as well as the reproducibility of research outputs); integrity; and innovation, were very important topics on which it would be important to maintain a policy oversight. However, it was considered that at the current time these topics were ones for which no feasible measures were known, and that benchmarking and comparability was difficult to comprehend. Delegates suggested that bodies such as NESTA and RCUK may be able to provide additional insights into these topics, and that UKPISG should maintain a watching brief in these areas.

Leverage and investment

23. The expert group considered that measures of research investment, collaboration and leverage were important for inclusion within UKPIs. While issues were known to exist in terms of comparisons of research income to different subject areas, measures that provided information on the volumes of public and private investment leveraged by research activities were felt to be desirable. With a particular view to the international usage of measures of these topics, it would be important for indicators to address the issues noted previously with regards to the collaborative nature of research, as well as coverage of institutions and subject areas. Engagement and openness may also feature as issues in this context.

Diversity

24. Diversity of the UK's research base was acknowledged to be an area of particular potential with regards to UKPI measures. While engagement with initiatives such as Athena Swan may provide some useful information, delegates acknowledged that it would be difficult to capture true institutional engagement as opposed to compliance. Indicators that examined the profile of the research environment and workforce may require careful interpretation in terms of subject or institutional differences. However, it was considered that the information might prove a powerful lever for change and needed further exploration in the hope of finding a satisfactory UKPI.

Appendix 1 – Delegates in attendance at the roundtable discussions

1. The following individuals participated in the roundtable discussions held on Monday, 7 September 2015 at The Hotel Russell, London.

Heather Fry (Chair) – Higher Education Funding Council for England, and Chair of UKPISG

Anna Clements – University of St Andrews

Matthew Davey – Higher Education Funding Council for England

Dr Sumi David – RCUK (AHRC)

Professor Peter Halligan – Cardiff University

Dr Steven Hill – Higher Education Funding Council for England

Pauline Jones – University of Edinburgh

Professor Roger Kain FBA – University of London

Dr David Mawdsley – Individual academic

Gary Reed – Aberystwyth University

Dominic Rice – Department for Business, Innovation and Skills

Dr John Rogers – Stirling University

Dr Beverley Sherbon – RCUK (MRC)

Dr Glenn Swafford – Oxford University

Professor Mike Thelwall – University of Wolverhampton

Linda Tiller – Higher Education Funding Council for Wales

Jonathan Waller – Higher Education Statistics Agency

Vasanthi Waller – Higher Education Funding Council for England

Professor James Wilsdon – University of Sussex

Dr Adam Wright – National Union of Students

Alison Brunt – UKPISG secretariat

Mark Gittoes – UKPISG secretariat

Appendix 2 – Background paper circulated to delegates

Roundtable discussion: The future of Research UK Performance Indicators for Higher Education

Background to the UKPIs and their review

1. The UK Performance Indicators (UKPIs) for higher education (HE) provide information on the nature and performance of the HE sector in the UK. They are intended as an objective and consistent set of measures of how a higher education provider is performing. The first set of UKPIs was published in 1999, having been developed out of recommendations of the National Committee of Inquiry into Higher Education (the Dearing Report) to provide suitable indicators and associated benchmarks of the performance of the HE sector. The UKPIs are Official Statistics.
2. The development of the UKPIs over time has been governed by the UK Performance Indicators Steering Group (UKPISG). This collaborative governance arrangement continues to bring together representatives of the four UK funding bodies for HE, the Higher Education Statistics Agency, government departments, HE institutions and other appropriate bodies to steer the development of these measures. For more information, see 'Performance Indicators' on the HESA web-site¹.
3. At present:
 - there are two levels of indicators: (i) institutional indicators published alongside associated benchmark values, and (ii) sector indicators
 - the UKPIs published in 2015 cover three areas: (i) widening participation, (ii) non-continuation/retention, and (iii) employment outcomes
 - the population covered can vary by (i) mode of study (full-time, part-time), (ii) level of study (first degree, other undergraduate), and (iii) age of student (young, mature)
 - the UKPIs cover all publicly-funded higher institutions in the UK and one privately funded institution, The University of Buckingham (i.e. they do not currently include HE registered at further education colleges, or at other privately funded providers).
4. A fundamental review of the UKPIs was commissioned by UKPISG in early 2013, in the context of large-scale, fast-paced changes in the HE sector, and differing policies for HE between the UK nations. The overarching aim of the research was to review the rationale, purpose and policy drivers of the UKPIs, the usage and the users of the UKPIs; and whether the existing UKPIs were still fit for purpose. The review engaged with a wide range of interested bodies and organisations, and was published in December 2013.
5. At the time of the review, the UKPIs included four indicators of annual research output. They looked at numbers of PhDs awarded and amount of research grants and contracts obtained, relative to the academic staff costs of a HE provider and relative to the funding council allocation of quality related (QR) research funds to that HE provider. Each indicator was expressed as the proportion of output relative to the rest of the sector per proportion of input

¹ <https://www.hesa.ac.uk/content/view/2072/141/>

relative to the rest of the sector. To take account of the different patterns of input to output in different cost centres, the ratios were obtained for each cost centre, and then combined to give the single indicator.

Review outcomes to date

6. 'How should we measure higher education? A fundamental review of the UK Performance Indicators'² found that UKPIs are valued as a way to measure HE provision, and that the current approach to UKPIs is appropriate. However it also determined that:

- a) the current set of UKPIs requires some refinement
- b) there is scope to introduce a small number of additional UKPIs to take account of the wider role of HE
- c) there is a desire to broaden the populations and institutions covered by UKPIs to take account of the changing make-up of HE provision and of the HE sector.

7. Upon their acceptance of a set of recommendations arising from the review process, UKPISG committed to engage with the sector as change is taken forward. It has been considered that full implementation of the recommendations accepted by UKPISG will take time and need to proceed in stages. UKPISG have envisaged a series of engagements with the sector and other relevant stakeholders as areas of possible change are addressed.

8. The first of such engagements was an invitation issued in December 2013 for comment on some of the first actions proposed by UKPISG in its initial response to the findings of the fundamental review of UKPIs. Specifically, UKPISG asked for comments on:

- a) A revised set of principles for the UKPIs.

A series of guiding principles for the UKPIs has now been formally accepted, and these are shown at Annex A. The principles will be used by UKPISG to guide its governance of the UKPIs, and to assess the utility of the UKPIs for their key audiences. It should be noted that UKPISG intends the principles to be guiding rather than binding and reserves the right to revise the set of principles over time, as required or appropriate to ensure its continued successful governance of these measures.

- b) A proposal that the existing research output UKPIs should be discontinued.

Respondents were invited to consider their support (or otherwise) for the proposal, as well as what might follow from it. Having considered that the responses to the invitation to comment provided further evidence and support for the removal of the existing measures, UKPISG documented a series of decisions about the future of the research UKPIs in July 2014³. These decisions included that the existing set would be discontinued after the July 2014 publication, and that new UKPIs were needed in the area of research.

Development of new Research UKPIs

9. Following UKPISG's decision that the existing set of research UKPIs be discontinued, and agreement that new research UKPIs should be developed, the group committed to work with

² <http://www.hefce.ac.uk/pubs/rereports/year/2013/ukpireview/#d.en.85232>

³ http://www.hefce.ac.uk/pubs/year/2014/CL_212014/

others to explore new and current measures of research output and/or activity that could be of use or interest across a range of stakeholders.

10. If UKPIs in this area are to be developed then it is important that UKPISG are able to gain a good understanding of the latest issues and interests relating to research indicators. In order to do this, UKPISG has brought together an expert group that will provide access to the level, depth and breadth of specialist knowledge required. Fundamentally, the intention for this roundtable discussion is to canvass as many priorities and possibilities for measuring research outputs and/or activities within the UKPIs as possible. UKPISG will subsequently identify those priorities and possibilities that might be both important and appropriate to measure in UK PIs.

11. The likely course of development will be to then ask the UK Performance Indicators Technical Group (UKPITG) to explore the feasibility and robustness of each measure identified. On the basis of this, UKPISG will then decide which potential new UKPIs to publish as experimental statistics. This will enable feedback to be gathered before a final decision on the new set of research UKPIs is made by UKPISG.

12. To this end, the UKPISG have identified a number of topics on which they would like to seek the advice and input of attendees to these roundtable discussions. Some specific questions have been devised by the UKPISG, and these will be posed to the expert group for discussion within the breakout sessions included within the agenda. As well as its own suggestions, the expert group will be asked to consider areas and indicators raised by respondents to the December 2013 invitation to comment:

- postgraduate research completion, retention, qualification or success rates
- undefined innovation measures
- statistics derived from the Research Assessment Exercise (RAE) or the Research Excellence Framework (REF)
- Snowball metrics
- research grants and income, or postgraduate research students, per academic full-time equivalent
- research grants applied for
- research income secured
- impact of research on wider society.

13. The discussions will be framed within the broad question of: 'Bearing in mind the large-scale and fast paced changes in the UK HE sector that have occurred in recent years (and continue to occur), what are the purposes, priorities and policies that it is now appropriate or necessary for a set of research UKPIs to serve?'. Discussions will include an assessment of the conformity of any suggestions to the principles for UKPIs.

Annex A – Guiding principles for the UK Performance Indicators

1. Recommendation 4⁴ for the future of the UK Performance Indicators (UKPIs), as accepted by the UK Performance Indicators Steering Group (UKPISG), states that:

‘The key features of the current UKPI approach should be retained. A set of guiding principles should be developed (building on those from a 2006 review of the UKPIs) and used by the UKPISG to judge the appropriateness both of making changes to the existing UKPIs and of introducing any new UKPIs suggested for the future.’

2. In response to the recommendation outlined above, and building on suggestions made by the ‘Fundamental review of the UK Performance Indicators’, a set of guiding principles for UKPIs was proposed by the UKPISG. It is anticipated that these principles will be used by the UKPISG to guide its governance of the UKPIs, and in particular to assess the utility of the UKPIs to their key audiences. Any new or amended UKPI will be assessed against each of the principles listed below to explore whether it should (and, to some extent, could) be produced at sector and individual institution level, or at sector level only. It should be noted that UKPISG intends the principles to be guiding rather than binding.

3. The UKPISG notes the collaborative nature of its governance of the UKPIs, with representation from Government, funding bodies and the sector. It is within this context that UKPISG reserves the right to consider the merits of any new or amended indicators on a case-by-case basis as necessary. The group also reserves the right to revise the set of principles over time, as required or appropriate to ensure its continued successful governance of these measures. Notwithstanding this, the group notes and will stand by Recommendation 9 of those recommendations accepted by UKPISG, which states that:

‘The introduction of any additional UKPIs or amendments to existing UKPIs must involve further dialogue with the sector to ensure buy-in.’

Proposed guiding principles for UKPIs

A: Coverage and scope

A1: UKPIs should normally seek to reflect the totality of higher education (HE) provision and institutions across the UK.

A2: UKPIs should measure what matters, notably underpinning long-term policy goals for the sector and reflecting the core mission of a significant proportion of institutions. In some areas sector-level only measures might be more appropriate than those at institution level.

A3: UKPIs should, as standard, provide an aggregate picture of UK HE and allow institutions to compare themselves to other institutions in the different nations across the UK. In addition there may be a requirement for a small number of nation-specific indicators that reflect differing national contexts.

A4: Taken together, the UKPIs and their associated benchmark values should provide information in the public domain that is not otherwise easily available. There must be a value to a wide range of stakeholders in publishing the UKPI and benchmark values at institutional level.

⁴ The recommendations accepted by the UKPISG are listed at Annex A of ‘Invitation to comment on future changes to the UK Performance Indicators’ (HEFCE Circular letter 33/2013) available at <http://www.hefce.ac.uk/pubs/year/2013/cl332013/#d.en.85233>

B: Quality of data

B1: UKPIs should be produced by a credible and independent organisation.

B2: UKPIs should be evidence-based and statistically robust, conforming to recognised best practice in the production of statistical information. Data used for the indicator should be of high quality collected in a consistent and fair way across the sector; they should have a good sample base, use consistent definitions, and use a transparent methodology.

B3: UKPIs should normally have longevity/continuity, enabling a time series to be developed and the ability for users to conduct longitudinal analysis.

B4: UKPIs should be produced in a regular and timely fashion and where possible, be produced annually. However it is acknowledged that it may not be sensible for all new UKPIs to be produced annually, especially where to do so would be costly or put too much of a burden on institutions.

C: Dissemination

C1: The UKPIs and their associated benchmark values should be free and available to all.

C2: Details of the methodology and benchmarking process used in the production of the UKPIs should be published for the benefit of institutions, bodies acting on behalf of institutions, government bodies and agencies and any other interested parties. No institutional-level results should be published before giving the participating higher education providers an opportunity to correct errors of fact.

C3: Publication of the UKPIs and their associated benchmarks should include appropriate guidance and contextualisation so as to facilitate accurate interpretation of the measures and the outcomes that they seek to represent.

D: Benchmarking and enhancement

D1: UKPIs should be directional and attributional measures. There must be general agreement as to what represents a positive or a negative outcome, and that movement in values can be attributed to changes in sector or institutional activity rather than solely reflecting wider extraneous factors. This enables users to understand the direction of travel of the sector and of individual institutions, and so UKPIs can be used to underpin policy development and evaluation as well as institutional performance enhancement.

D2: There should be an expectation that institutions will take note of their indicators and benchmarks, look carefully at any differences occurring with a view to further exploring areas of weakness in their institutional performance, and ultimately strive to improve.

D3: UKPIs and their associated benchmarks should not be presented in such a way as to imply any institutional ranking. They should provide information for external policy-making stakeholders that is suitable for informing policy, and information for institutions that is suitable for internal use.

D4: The benchmarks provided in association with UKPIs should take account of context and differing institutional characteristics, thereby supporting fair comparison of indicators between institutions.

E: Burden of data collection

E1: Where possible, existing data sources should be used to develop new UKPIs and/or to improve existing UKPIs. Any proposal to collect further data should be carefully costed through dialogue with the sector or their representatives, and justified in terms of anticipated use and

usefulness. The UKPISG should be mindful that the UKPIs should not place undue burden on the sector.

F: Influence on behaviour

F1: Publishing UKPI and benchmark values at institutional level must not knowingly create perverse incentives or lead to perverse behaviour.

F2: UKPIs should comply with all relevant legislation and evolving best practice, particularly in the areas of statistical disclosure control and support of fair competition between institutions.