How should we measure higher education? A fundamental review of the Performance Indicators

Part One: The synthesis report

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November 2013

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Acknowledgements

The authors would like to thank the individuals who contributed to this review for taking the time to support the research and for their frank and insightful feedback. Thanks too go to Mark Gittoes and Alison Brunt at HEFCE for their patient and supportive project management, and to the members of the review Steering Group for their helpful comments and suggestions in setting up the review, guiding the fieldwork and producing the review reports. The review steering group were: Celia Hunt, Chair (HEFCW), Ben Arnold (HE Wales), David Barrett (OFFA), Alison Brunt (HEFCE), Mark Gittoes (HEFCE), Jovan Luzajic (UUK), Michael McNeill (DELNI), Debbie McVitty (NUS), Richard Puttock (HEFCE), Martin Smith (SFC) and Jonathan Waller (HESA).

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Executive Summary

The UK Performance Indicators (PIs) were developed out of recommendations of the Dearing Report to provide suitable indicators and associated benchmarks of the performance of the higher education (HE) sector. The first set of PIs was published in 1999 on behalf of the UK funding councils. The PIs have been monitored over time but the Performance Indicator Steering Group (PISG) felt that given the large-scale and fast-paced changes in the HE sector and the differing national policies for HE, it would be timely to undertake a fundamental review of the PIs: to ask whether, and if so how, we should measure HE.

The overarching aim of the research was therefore to review the rationale, purpose and policy drivers for the PIs, the usage and the users of the PIs across the UK, and whether the PIs are still fit for purpose in order to inform the future direction of the PIs. The review was not concerned with detailed issues about specific sets of indicators nor the policy concerns of individual nations.

The review involved a number of qualitative methodological steps: a review of relevant literature, in-depth interviews with funding agencies and other key sector stakeholders, in-depth interviews with representatives from HE providers, online consultation to gather written submissions from a wider range of stakeholders, and deliberative group discussions with research participants.

This report presents a synthesis of findings from across the methodological strands to answer the questions set for the review. Further detailed findings from each of the strands are provided in a separate report – *Part Two: The evidence report*.

Key message

The key message from this review is that PIs are valued as a way to measure HE and the current approach to PIs is appropriate, so fundamental change is not required. However: a) the current set of PIs require some refinement; b) there is scope to introduce a small number of additional PIs to take account of the wider role of HE; and c) there is a desire to broaden the population covered by PIs to take account of the changing make-up of HE provision. There is appetite for change to ensure the measures remain useful, so work to refine the existing PIs should begin as soon as possible. The feasibility of making the other changes also needs to be explored, as developing new PIs and bringing other types of provision into scope may take several years to accomplish. Change at any level must be phased in to allow stakeholders to acclimatise.

Key findings

1. As a tool for measuring the performance and profile of HE, PIs have value. There is a widespread and genuine appetite for retaining PIs and they have a number of key strengths.
   - They are credible, legitimate, and independent, as they were developed for the sector in consultation with the sector, rather than by individual institutions, and have been produced by a credible and trusted organisation.
   - They have a UK-wide coverage and perspective, providing as standard an aggregate picture of UK HE.
   - They allow institutions to benchmark themselves against institutions across all four nations with a high degree of reliability, and the benchmarks provided take account of context, comparing institutions in a fair way to each other (using objective groupings of institutions, and comparing like with like).
   - They are evidence-based and statistically robust, due to the use of consistent definitions, and use of high volume and high quality data that are collected in a consistent and fair way across the sector. They also utilise a transparent (although sometimes complex) methodology which gives users a clear sense of what concepts such as widening participation and non-continuation mean.
   - They have been established and largely unchanged for some time, giving them a longevity/continuity that enables a time series to be developed and the ability for users to conduct longitudinal analysis.
   - They are free and available to all.
   - They provide measures not targets, measures that are not directly linked to funding behaviour or presented as institutional rankings.

   These recognised strengths give rise to a set of core principles that can guide refinements to existing PIs and the introduction of any new PIs developed in the future. These principles address: coverage and scope, data quality, dissemination, benchmarking and enhancement, burden of data collection, and influence on behaviour (see below).

2. PIs provide a measure of the performance of the sector as a whole and of the performance of its individual providers. They are a specialist tool developed for government (acting on behalf of the public) to fit with long-term sector level strategies and policy priorities across the whole UK, but the primary user group are providers of HE. This creates a duality in need and purpose, and this situation is likely to continue to be the case going forwards. There is a sector-level and UK-wide need for quality assured performance measures to: justify the case for UK HE, ensure public confidence in the sector and its institutions, and assess the impact of policy and service improvements. There is also an institutional level need for such measures for internal performance management and peer referencing (via benchmarks). For many institutions the desire for peer referencing goes beyond a comparison at whole institution level. Institutions want to drill down into the PIs, to go beyond the published data, to understand comparative performance of groups within their student body, and of units within their organisation. However, PIs are not appropriate for this level of interrogation as it shifts the balance towards specific needs of individual institutions. This need is best served by the increased functionality of the dedicated web-based management information tool (HEIDI) available to institutions, rather than making any changes to the PIs. PIs are also not appropriate for all audiences. Prospective students and their sponsors are recognised as important stakeholders in the sector but they are not considered to be a direct audience for PIs as they will struggle with the underlying

concepts, rules and definitions which could lead to misunderstanding, misinterpretation and misuse of the data. Instead this group have a well developed and dedicated set of information sources to support their choices.

3. The context for HE has changed considerably since the first set of PIs were introduced in 1999, with changes in the funding of HE arguably moving the sector towards free-market principles; increasing diversity at a macro (nation) level and at a micro (institution and student) level which is changing the make-up of HE and challenging existing definitions of 'sector', 'student' and 'learning success'; growth in distinctive HE missions expanding the purpose of HE beyond teaching and learning; and increased data collection from institutions and individuals, and thus data availability. This creates three distinct opportunities for the PIs:

   a) Refining the current set of PIs: The current set of PIs covers relevant topics for all four nations – widening access, student retention, graduate employability and research – but the measures used are now no longer entirely fit for purpose in this new context and therefore need some refinement. However, there is a tension between the need to keep up with the dynamism in the sector and the need for stability in PIs in order to assess trends and direction of travel. Various suggestions from stakeholders for amending the existing PIs have been captured in this review. The feasibility of these suggestions must be explored further and the sector should be consulted before any concrete changes to existing PIs are made. If changes are agreed, a phased introduction should be considered (running the old and new versions alongside each other).

   b) Broadening the coverage of the PIs: The PIs do not currently reflect the full make-up of HE provision and take-up. There is strong support among stakeholders for PIs to reflect this diversity more effectively to encompass the HE provision of further education (FE) providers and alternative/private providers; where possible to move beyond the focus on full-time undergraduate students to capture the experiences of students at postgraduate level, as well as 'less typical' groups of undergraduate students; and to accommodate and capture new learning modes and levels of learning. The ability to broaden the coverage will be dependent on data availability and reliability, and on the ability to present the outputs in useful ways that will not compromise confidentiality. It will also depend on different types of providers to collect and return data. Whether this is feasible must be explored further.

   c) Introducing new PIs: A range of potential new areas for PIs have been suggested by stakeholders (including HE providers) to broaden the focus of PIs in order to reflect the full range of sector activity, to make use of available data and to support evidence-based decision making. These new areas include financial sustainability, teaching quality, international outlook, employer and business engagement, and the value-added or value for money offered by HE, either at an individual institution or sector level. However, the feedback captured in this review indicates that providers may be reluctant to support the introduction of institutional level PIs and benchmarks in new areas if they serve to impede competitive advantage, are used in league tables, or substantially increase the burden of data collection. Indeed, the resources required by institutions to gather, process and return data is substantial and there is a strong desire among providers not to collect any further information and/or make additional data returns. Significant amounts of data are collected and are available already and it may be possible to improve existing PIs and establish new PIs fairly easily by making use of this existing data. In developing new PIs, the concepts behind them need refining, they should be assessed against the guiding principles (see below), and the feasibility of developing individual measures must be explored. The introduction of any new specific PIs, particularly at institutional level, should involve further consultation with the sector to ensure that competitiveness is not unduly affected by publishing PI values and benchmarks and to secure institutional support (buy-in).

Recommendations and principles

Recommendations

Recommendation 1: PIs and benchmarks have value and should therefore be retained.

Recommendation 2: PIs should continue to have UK-wide coverage.

Recommendation 3: PIs should continue to focus on UK-wide sector level priorities and provide both sector level and institutional level measures and benchmarks in these areas.

Recommendation 4: Specific individual institution level operational indicators that move beyond general priorities should be developed using the improved functionality and accessibility of the Higher Education Information Database for Institutions (HEIDI), rather than developed as separate PIs.

Recommendation 5: Students (prospective and current) should not be considered a direct audience of PIs, and instead the information contained in PIs should be disseminated to students indirectly through mediating bodies.

Recommendation 6: The key features of the current PI approach should be retained. A set of core principles should be developed (building on those from the 2006 review) to judge the appropriateness of making changes to the existing PIs and introducing any new PIs suggested for the future.

Recommendation 7: The feasibility of extending the coverage of the population included in the PI measures should be tested, in terms of: a) institutions, b) students, and c) study mode.

Recommendation 8: The current set of PIs should undergo a more detailed review to ensure they use the most appropriate data and have the appropriate focus to measure the specified topics.

Recommendation 9: The feasibility of broadening the coverage of PIs into five new areas (mostly beyond teaching and learning) should be explored: i) value-added, ii) financial sustainability, iii) teaching quality, iv) international outlook and v) employer and business engagement.

Recommendation 10: The introduction of any additional PIs or amendments to existing PIs must involve further consultation with the sector to ensure buy-in.

Revised principles for PIs

A: Coverage and scope

A1: PIs should measure what matters, underpinning long-term policy goals for the sector rather than short-term political priorities, and reflect the core mission of a significant proportion of institutions rather than the specific operational issues of individual institutions. In some areas, sector only measures might be more appropriate.

A2: PIs should have a UK-wide coverage providing as standard an aggregate picture of UK HE. While the four nations of the UK are developing different policies to respond to the needs of their public and priorities, institutions should still be able to compare themselves to other institutions in the different nations.

B: Quality of data

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

B2: PIs should be evidence-based and statistically robust. 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: PIs should have longevity/continuity, enabling a time series to be developed and the ability for users to conduct longitudinal analysis.

B4: PIs should be produced in a regular and timely fashion. Where measures are out of date they are less useful in terms of assessing current institutional performance. To promote the timeliness of data, PIs should, where possible, be produced annually. However it is acknowledged that it may not be sensible for all new PIs to be produced annually, especially where to do so would be costly or put too much of a burden on institutions.

C: Dissemination

C1: PIs and benchmark values should be free and available to all. They should provide information in the public domain that is not available via other means. There must be a value to the public in publishing the PI and benchmark values at institution level. In some areas, sector only measures might be more appropriate.

C2: Data and the methodology used in the production of the PIs should be made available to institutions, bodies acting on behalf of institutions, and government bodies and agencies. No institutional level results should be published before giving the higher education institutions (HEIs) concerned an opportunity to correct errors of fact. The methodology should also be available to all other interested parties on request.

D: Benchmarking and enhancement

D1: PIs should be directional and attributional measures. There must be general agreement on whether high values of the indicator represent 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 direction of travel of the sector and of individual institutions, and so PIs can be used to underpin policy development and evaluation and institutional performance enhancement. There should be an expectation that institutions will take note of their performance, strengthen areas of weakness and strive to improve.

D2: PIs and their associated benchmarks should not be directly linked to funding as externally imposed targets or lead to institutional ranking. They should provide information for government stakeholders that is suitable for informing sector level policy and information for institutions that is suitable for internal use (this may involve target setting).

D3: PIs and their associated benchmarks should allow institutions to compare themselves with a high degree of reliability. The benchmarks provided should take account of context, comparing institutions in a fair way to each other (using objective groupings of institutions and comparing like with like).

E: Burden of data collection

E1: PIs should not place undue burden on the sector. Where possible, existing data sources should be used to develop new indicators/improve existing indicators, including data submitted to HESA by providers, and relevant administrative datasets. Any proposal to collect further data should be carefully costed and justified in terms of anticipated use and usefulness.

F: Influence on behaviour

F1: Publishing PI and benchmark values at institutional level must not create perverse incentives or lead to perverse behaviour. In some areas, sector only measures might be more appropriate.

F2: The design and use of PIs must not undermine competition in the HE sector. In some areas, sector only measures might be more appropriate.

1 Introduction

1.1 Introducing the performance indicators

The UK Performance Indicators (PIs) were developed out of recommendations of the Dearing Report (1997)[1] to provide suitable indicators and associated benchmarks of the performance of the higher education (HE) sector. The principles underlying the development of the PIs were that they: use a consistent and standard format, are objective, and are simple, clear and fit-for-purpose. The first set of PIs was published in 1999 by the Higher Education Funding Council for England (HEFCE) on behalf of all the funding councils across the UK, and in 2004 responsibility transferred to the Higher Education Statistics Agency (HESA). HESA produce the PIs annually. At present:

- there are two levels of PI: (i) institutional indicators and associated benchmark values and (ii) sector indicators
- there are four areas of PI: (i) access/widening participation, (ii) non-continuation/retention, (iii) employment outcomes, and (iv) research
- the population covered can vary by (i) mode of study (full-time, part-time), (ii) level of study (first degree, sub-degree) and (iii) age of student (young, mature).

The current position is set out in *Part Two: The evidence report*, Appendix C.

To guide the development of these important metrics, the Performance Indicators Steering Group (PISG) was set up in 1998. The PISG monitor the PIs, and have made some changes over time to ensure the indicators remain fit for purpose. As a result the PIs have continued to evolve since their introduction.

1.2 The need for a fundamental review

The world in which HE operates is changing. Economic activity is relatively low and the public sector, including the HE sector, has seen large scale reductions in public funding, and this is putting pressure on universities and colleges to look for alternative sources of funding. Youth unemployment is at very high levels, arguably restricting alternative pathways to the labour market for school and college leavers, and increasing competition

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1 Dearing, R (1997), Higher education in the learning society, Report of the National Committee of Enquiry into Higher Education, HMSO, London. Recommendation 58

in the graduate labour market (if indeed one believes there still is a separate and distinct graduate labour market). The four nations of the UK are becoming increasingly separate, with policies around education diverging or at least developing at different rates, particularly around HE funding and institution regulation. The costs of HE are increasingly shifting towards the individual beneficiaries of HE to re-balance funding from recurrent grants towards tuition fees, and students are seeing higher tuition fees and thus higher levels of debt after leaving HE. The sector is built on the principles of institutional autonomy and academic freedom but there are accountability and regulatory requirements that protect the student interest and public investment. These have also been subject to reform, including changes to the regulations governing the use of the university title and who can offer and validate HE awards that will enable a more diverse group of providers to enter the sector, whilst at the same time introducing stricter number controls which will help to control the HE budget and student support costs to Treasury. All these changes mean that who studies, where they study and how they study are changing. These changes and challenges and the implications for PIs are explored further in the next chapter.

The PIs have been monitored over time but the PISG felt that given the large-scale and fast-paced changes enveloping the HE sector and the differing national policies for HE across the UK it would be timely to undertake a fundamental review of the PIs and ask a range of searching questions about how we should (if at all) measure HE: Do the current PIs capture and reflect the whole picture of HE? Have they been able to keep up with the changes in the nature of the HE population and provision? Are they still meaningful measures? And for whom?

1.3 Research aims and objectives

The overarching aim of this research is therefore to review the policy drivers for the PIs, the usage of the PIs and the users of the PIs across the UK in order to inform the future direction of the PIs; it is not concerned with detailed issues about specific sets of indicators (such as the technical calculations involved) nor the policy concerns of individual nations. This review therefore represents the first part of a review process that, if the PIs are still considered useful and used, will go on to examine the potential for more detailed changes and improvements to the scope, coverage and detailed calculation of the PIs.

More specifically the research aim is to explore:

- the rationale and purpose of the PIs and benchmarks, and the issues that these particularly seek to address
- the audience for PIs, how they use them and whether different audiences have competing needs
- the influence PIs have over behaviour (at sector, institution and individual level)
- how PIs fit with other measures of institutions’ performance
- any challenges for the PIs – asking are the PIs still fit for purpose? And are there any gaps or perceived gaps in the coverage of the PIs?

Essentially the research seeks to understand who are the current users and potential future users of PIs, what are their information needs, how do the PIs fit within this landscape, and how can they better meet needs. It does so by engaging with a broad set of existing and new stakeholders.

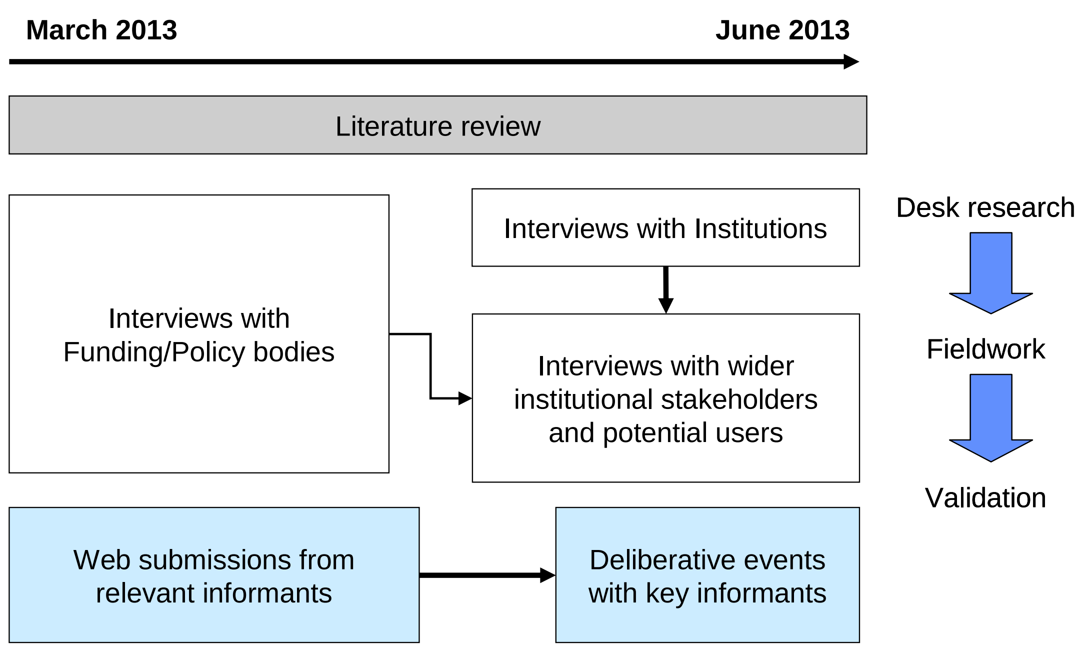
1.4 Methodology

A number of qualitative research techniques were used to engage with a range of current and potential audiences for PIs in order to meet the research objectives and to ensure the greatest possible diversity of viewpoints were reflected in the review, comprising:

- a review of the relevant literature
- interviews with 14 wider sector stakeholder bodies including funding agencies and other key organisations (involving 32 individuals)
- initial interviews with HE providers, followed by 2nd tier interviews with wider institutional stakeholders including potential PI users (involving 12 institutions and 23 individuals)
- online consultation via written submissions to a secure website to gather responses from a wider range of existing and new stakeholders, including education providers, government departments, employer representative bodies, organisations representing HE customers, students and their parents, careers advice services, academics and other relevant public bodies. In total 67 submissions were received from a wide range of sector organisations.
- deliberative group discussions held through two half-day events, involving a range of interested parties drawn from among the groups invited to submit written responses: 41 individuals across 36 organisations (24 providers and 12 sector organisations) took part in these events.

The approach is summarised in the following chart (Figure 1.1):

Figure 1.1: Summary of methodology



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In undertaking the analysis, the data captured across all streams were brought together to identify key themes, and were triangulated to look for areas of convergence and areas of dissonance to identify whether the motivations/drivers, information needs and potential frustrations of PI users were similar or different across the range of audiences and in different contexts. However it is important to recognise that using a qualitative approach means that, unlike in large scale survey research, the qualitative feedback captured through the various streams cannot be interpreted as being entirely representative of all stakeholders and where there are opposing views these cannot be accurately weighted to provide an overall result.

Note that the term ‘stakeholder’ has been used as a descriptor to cover providers (institutions providing HE) and wider sector bodies and organisations.

This report presents a synthesis of findings from across the methodological strands to answer the questions set for the review. Further detailed findings from each of the strands are provided in a separate report – *Part Two: The evidence report*. This second report also provides a glossary of terms used, a list of bibliographic references (Appendix A), a full list of participating organisations and institutions (Appendix B), and a list of the current PIs (Appendix C).

2 The context and challenges for PIs

Stakeholders in the interviews and deliberative events felt the review of the PIs was timely and discussed the way in which the HE context and performance data are collected and disseminated has changed considerably since the PIs were developed and introduced in the late 1990s. This creates new needs and challenges for measurement and also potential new audiences for measures and indicators.

2.1 Marketisation of HE

Students at the heart of the system

A key change has been the shift in the funding of HE in England, Northern Ireland and to some degree in Wales away from the funding councils towards private funding; this has reduced direct funding from central sources and significantly increased the level of fees paid by domestic students. This has arguably moved the sector towards free-market principles, introduced the potential for some institutions to become increasingly financially vulnerable and heightened the need for providing information to students and their sponsors.

There is a perception in the sector that the core interests for institutions will not change but with changes in funding and associated regulation, the interests and information needs of governments, funding bodies and the public (or customers) might shift, expand and diverge.

- Stakeholders felt that the way HE is perceived has changed and there has been an increasing emphasis on accountability leading to a greater bureaucratic burden on institutions, more complex governance and increased legislation. The sector needs to provide information about the financial viability and sustainability of institutions.
- The changes have also contributed to the rise of the ‘student as consumer’, changing the language used and placing a new emphasis on informing consumers ahead of their next purchase, and also an emphasis on the ‘student experience’ (over and above other measures of quality such as assessment of teaching quality). The sector needs to produce accessible information on the student experience and the value-added/value for money provided by HE for students and their sponsors to help them to make the right decisions for their investment in a competitive and diverse market.

This creates challenges for the PIs, which are currently UK-wide, do not cover all aspects of HE activity and are arguably not accessed by (or produced for) prospective students.

Increased competition between institutions

Related to these issues were concerns about what was seen as increasing competitiveness within the sector – a marketisation in attitude – with HEIs competing for students. This competitiveness has been heightened in England by the high grades policy on student number controls, which was perceived by some stakeholders to favour selecting universities 'at the top of the league tables' and could leave other institutions struggling to hold onto the most high-performing students in the future. This increased element of competition/marketisation within the HE sector has implications for the future of PIs. Some providers were very reluctant to support the introduction of PIs in new areas which might (through incorrect use or misinterpretation) serve to weaken their position in league tables, undermine competition, or threaten the competitive advantages of particular institutions or groups of institutions. Similarly stakeholders (sector stakeholders and providers) recognised that competition was complicated by the open availability of data. While transparency was highly valued on the one hand, on the other it was seen to undermine competition within the sector.

2.2 Increasing diversity

Diversity across UK nations and other countries

Stakeholders felt that the sector is also becoming more diverse. At a macro level, the four nations of the UK are developing different policies to respond to the needs of their public and priorities, yet a UK-wide set of PIs is still needed. Institutions want to compare themselves to other institutions in the different nations, institutions collaborate across nation boundaries and students too cross national boundaries to study. The areas covered by the PIs are at present relevant to all nations of the UK, but stakeholders were critical of the Anglo-centric nature of the current PIs which they felt did not always correspond with the policy targets in devolved administrations (leading to some UK nations supplementing the UK PIs with measures designed to address their own policy priorities). There was strong support for ensuring that UK PIs offer equal value for all UK nations but it was also felt that some additional nation specific PIs might be appropriate particularly around widening participation/access using different measures to identify under-represented groups.

Across the sector there has also been an internationalisation of provision and increased international focus including expansion of international recruitment, students spending time abroad and an increase in transnational delivery. This brings with it a desire to think beyond the UK and to compare the performance of UK HE and individual institutional performance on a more global stage, comparing with other countries to be able to articulate what a university experience in any of our four nations or our universities is like.

Diversity in HE make-up

At a micro level the student body continues to grow and become more diverse, with providers seeing increasing variety in the qualifications of HE entrants, in particular the growth in vocational qualifications, and an expansion of postgraduate provision. Provision too continues to diversify, with new and different institutions entering the sector as providers in their own right or in partnership or franchise arrangements with existing HE providers. With changes in England to the rules for university title and degree awarding powers, the diversity will increase and more further education (FE) providers and alternative or private providers (both for-profit and not-for-profit) will enter the market. These changes create challenges in how to define and measure 'students' and particularly the ‘sector’; whilst the increase in competition brings with it issues and concerns around commercial sensitivity and willingness to share data (as noted above). Stakeholders felt that with the increased diversity it will be especially important to recognise and be sensitive to institutional difference in developing the PIs. As institutions are becoming increasingly differentiated this may require additional contextualisation of data or a difference in the way data are presented.

Another dimension to diversity is learning mode and level. There have been advances in learning technologies and changes in learner preferences since the 1990s which have led to an increase in online learning, distance delivery, part-time provision and delivery arrangements that do not involve students attending a physical location. There has also been diversity in the range of courses available to students, some of which have relatively small cohorts. This too presents challenges as arguably there is no longer a standard student journey and traditional notions of learning success may no longer be appropriate, so the PIs will need to reflect new flexibilities in the delivery of learning which may lead to difficulties in drawing comparisons and interpreting the data on performance.

2.3 Evolving role of universities

The role of universities has also continued to evolve, and there has been a growth in distinctive HE missions, expanding the purpose of HE beyond teaching and learning. Providers are increasingly part of the local community, business community and the global marketplace. They also operate in an economic environment and are subject to the same pressures faced by other public and private organisations in the current difficult economic climate. To continue to secure funding in the face of substantial cuts in public spending, the sector needs to demonstrate the importance and ‘value-added’ of HE to the wider public.

These challenges create two pressures on PIs. Firstly a pressure to increase the areas or themes covered by the PIs beyond teaching and learning. This would be welcomed by the sector if additional measures would not increase the information burden nor undermine competition/competitive advantage, and would result in useful metrics and benchmarks[2]. Secondly, to move away from the current system of using PIs for performance reporting where there is an expectation that institutions will take note of their performance, strengthen areas of weaknesses and strive to improve; and instead to use PIs as externally imposed targets (*‘levers of control of institutional performance’*) with associated funding or sanctions. The latter would be strongly opposed by providers.

2.4 Increased data collection

The amount of data collected from individuals and institutions has increased since the PIs were introduced and this creates opportunities to present more information publicly and produce more PIs. However the resources required by institutions to collect, process and

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2 The sophisticated benchmarks produced by HESA provide expected values for an indicator taking into account a range of factors that: a) vary significantly from one institution to another; and b) are deemed not to be in the institution’s control but that may have an influence on performance. Benchmarks can be used in two key ways. Firstly, comparing an institution’s PI with their benchmark figure compares their actual performance to essentially an adjusted sector average, and significant differences in performance from the benchmark are identified. Secondly, looking for institutions with similar benchmark figures identifies comparator institutions against which to assess actual performance.

return information on their students are significant; as is the time and energy required to quality assure and interpret the PI data, and to put them into a useable format for the institution's own purposes. With the current focus on efficiency and driving down costs, there was a strong desire among stakeholders not to collect any further information and/or make additional data returns. It will be important to look to the debates around Big Data[3] in order to learn good practice lessons on how to store, share and fully utilise the vast amount of data the sector already generates through routine collection and that which arises incidentally.

The opportunities for data linkage have also increased over time in order to track true progression using different data sources such as the National Pupil Database (NPD), UCAS and the Student Loans Company (SLC). Similarly other sectors such as FE and international HE providers have produced their own PIs which present opportunities for alignment. However a key concern of providers is that PIs should be replicable by institutions, and this will not be possible if linked data are used. An additional concern is that many of the potential sources for linkage are not UK-wide (eg NPD is relevant to England only) which will increase the level of complexity if different nation level data need to be sourced and aligned before it is linked.

2.5 Desire for stability

There is a tension between the need for stability in measures in order to assess trends and direction of travel and the need to keep up with the dynamism in the sector. Stakeholders expressed a desire for stability in the PIs, as one of their key strengths is their continuity, enabling performance to be measured over time. Changes to the PIs would create a break in the time series and impede stakeholders' ability to examine and monitor trends. If the set of PIs were to be changed, stakeholders felt it would be important to: a) ensure that the policies being tracked via the indicators were likely to remain priorities for the sector for at least the medium-term; and b) allow sufficient lead-time in order for institutions (in particular) to prepare as, for example, institutions may link their strategic planning process to the PIs.

[3] Big data is the term used for a collection of data sets so large and complex that they become difficult to process using commonly used software tools.

3 Purpose of measures such as PIs

'The purpose of the indicators should be to provide a reliable set of key indicators that measure performance consistently across the sector and which are relevant to the sector. The result of which is that key insights can be made into key areas and issues can be addressed be it at sector level or institutional level to address these issues and ensure that all students are provided with an excellent higher education experience.' [Sector stakeholder]

Stakeholders discussed the need for measuring the performance of HE (the sector in aggregate and its institutions) and whether the PIs are still the most appropriate tool for doing so. They also considered in-depth the rationale and purpose of PIs and benchmarks and the issues they seek to address. The feedback indicates that the purpose or drivers of HE measures may have changed over time and become more nuanced, but most importantly there is a clear duality of need. This creates challenges for the future direction of the PIs – who should the PIs be developed for, and in making changes who should be consulted?

3.1 Duality of need

There are two polar positions on the purpose and drivers for measuring the performance of HE, and essentially two key audiences. This is manifest in the stakeholder feedback and is also evident in the literature from the 1980s where the foundations for the PIs were laid, and in the academic debates on the inter-related notions of performance measuring and performance management[4] (see *Part Two: The evidence report* 2.2 and 2.3).

- We have a sector level need for performance measures and the audience is the public (including taxpayers and potential customers of HE) and their government.
- We also have an institutional level internal performance management need for measures and the audience is the individual providers of HE.

This presents the problem of multiple audiences, with differing views on the rational or purpose for measurement, different information needs and different uses for the

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4 Lebas (1995) defines performance measurement as consisting of key indicators that provide contextual and case specific information, and defines performance management as including activities that influence these contextual factors such as training, management style, attitudes and incentives.

information. Stakeholders questioned how closely aligned are the needs of the two key groups – government and its agencies and institutions (who themselves are a large and heterogeneous group) – and indeed whether they should be aligned.

'There is a balance to be struck between creating merely robust, contextualised data and choosing data that people can reasonably understand and work with. It's the balance between public confidence and supporting practitioners… the underpinning assumption of a lot of government policy currently is that just making information available is the best way to service a competitive market... I think there is a risk that performance indicators get hijacked by the public information drive and that the outcome of that is that the balance swings more towards an idea of public reassurance and away from producing contextualised, robust data that actually says something about the actual performance of universities.' [Sector stakeholder]

'…what I would like to do is ensure that when we're being measured externally it aligns to our overall strategy as a university and that we're not having to create new data measuring processes just to keep other people happy.' [Provider]

This problem has plagued other measures, one example of this is the Teaching Quality Information (TQI) set of indicators. In its early development, the TQI was criticised for failing to meet its objectives in part due to it having been designed to meet the needs of several audiences (QAFRG, 2006). Where there are multiple audiences it can be unclear who the measures are for.

There was a general feeling that the areas covered by PIs are primarily driven by fit with government policy rather than institutional desire – so PIs are essentially produced for government(s) and their needs but primarily used by institutions (see also Chapter 6). This is reflected in the significant resource institutions utilise in collecting and submitting the relevant data used in producing the PIs, and particularly in the work that institutions do to make the PIs more useful to them: taking the data and calculating/deriving further measures to improve the functionality of the PIs for internal use in performance management (see also section 4.2).

3.2 Sector level drivers for measures

The stakeholder interviews and online consultation responses suggest that at the sector level there appear to be three key reasons for continuing to measure the performance of UK HE, both in aggregate and at individual institution level, and presenting this information to the public at large, thus driving the need for PIs.

Firstly, HE is recognised as an important asset for UK economic growth, and arguably HE itself has become more central to public policy-making. Measuring the performance and profile of the sector as a whole is important as it provides an overview, helps to justify the case for, and to substantiate the claims about, UK HE. This provides an absolute measure of performance, provides the public profile/reputation and value of UK HE in the global context, allows the sector and country to demonstrate and celebrate success, and importantly makes the case for continued public and personal investment in HE.

'HE is vital to the long-run economic growth. But explaining that to politicians all competing for valuable funding in an age of fiscal restraint is quite difficult without having these authoritative and objective indicators that we can point to.' [Sector stakeholder]

Secondly, the unique contractual relationship deriving from the funding system creates the need for government to establish whether the institutions they fund fulfil their requirements and do so effectively whilst not imposing undue costs, stifling innovation or causing a decline in service quality (Van Berkel and Borghi, 2008). Stakeholders felt that measuring HE is, therefore, about ensuring public confidence in the sector and its institutions, and about being accountable and having regulatory safeguards for the significant level of public money that supports the sector (money that comes directly via funding and research councils or indirectly via the Student Loan book) and the increasing levels of private investment (from individual students). Students, prospective students and their advisors, along with government and taxpayers, need evidence of how their money is being spent so they can hold the sector and institutions to account, and ensure that they deliver on their promises. Indicators therefore have a quality/public-value assurance role, and follow the practice of other sectors such as schools, health and local authorities which strongly focus on measuring the Three Es – economy, efficiency and effectiveness – and on delivering value for money (Newman, 2001; and Audit Commission, 1999).

> *'…if you are claiming to be spending quite a lot of money on something then you really want to know where it is going, and what effect it is having.' [Sector stakeholder]*

A third purpose for measuring sector level performance is to aid policy development, to evidence (where possible) the impacts of public policies and of service improvement, to show where successes have been made, and to ensure a diverse and healthy sector that exhibits good practice. Measuring performance in an area also keeps a policy high on the agenda, as, Osborne and Gaebler suggest in their influential work on public sector reform, *'What gets measured gets done*' (1992, p.146). There is a need to measure the direction of travel and this underlines the importance of having stable measures over time. However it also highlights the importance of linking measures to policy direction, and/or shaping them more explicitly towards demonstrating impact.

> *'I think there is a need to know what success looks like and to have a means to measure it.' [Sector stakeholder]*

3.3 Institutional drivers for measures (and benchmarks)

At an institutional level the main purpose for measuring profile and performance appears to be about benchmarking – using the PIs and the associated benchmark values to understand the relative performance of an institution against others (individual institutions or the sector as a whole) and to track progress over time. The literature notes how simple comparisons of headline indicators were felt to be misleading, because of differences in the nature of institutions, their student body and their objectives (eg Johnes and Taylor, 1990). Thus, over time, the benchmarks for the PIs have been further developed and become increasingly sophisticated. Stakeholders appreciate the work that has gone into the benchmarks but there are still some residual concerns about comparing *'apples with oranges' [Provider]* particularly with the increasing diversity within the sector which will increase further as FE and alternative/private providers are brought within PI scope (to 'level the playing field', see Chapter 2 above).

Stakeholders felt that benchmarking is becoming increasingly central to institutions and to their performance management and internal monitoring processes – to judge their performance, identify strengths and weaknesses and areas for improvement, make better decisions, and guide their improvement and enhancement activities particularly around the student experience. This improvement activity is recognised, welcomed and arguably expected by the individual governments within the UK (believing that performance measurement can deliver strong improvements in service quality and efficiency; Cutler and Waine, 2000). The PIs and the benchmarks are a key resource that institutions use in this activity as they provide for systematic comparison and evaluation, but as HESA suggest in their 'Benchmarking to Improve Efficiency – Status Report' (2010), they are not the only resource that institutions can use. The interviews suggested that benchmarks are used internally by institutions to assess the direction of travel against their mission statements and/or strategic plans, and externally to celebrate areas of success, demonstrate their ability to respond to changes in policy, and show that the work they are doing is making a difference (see also Chapter 6).

> *'It is very helpful to institutions, even if we quibble occasionally about the methodology and the exact benchmarking approaches; to have a reasonably level data playing field on which to compare your own progress is pretty fundamental.' [Provider]*

Unsuitable purposes

There were concerns raised about the wider use of institutional level PIs and benchmarking activity. The main concern centred around the potential to use benchmarks as targets imposed on individual institutions from the outside and that these could be used (improperly) to direct funding or to impose punitive sanctions (ie performance funding and/or performance budgeting). There were strong indications that linking PIs in this way would not be welcomed. This issue is complex and there is a delicate balance at play here as PIs can be used effectively to produce targets to encourage improvement (eg sector targets in Wales, widening participation targets in OFFA (Office for Fair Access) access agreements in England, and Key Performance Indicators for individual institutions). What providers object to is the imposition of targets (without consultation) by external agencies that are directly linked to reward or penalty.

A secondary concern was the use of PI data without proper contextualisation in the construction of league tables, which are felt to have undue influence in the public domain (see section 6.2.3). However the public nature of the PIs and the benchmarks means that these can be used as external and public checks of how well an institution is performing, acting as a way to check *'is this institution up to scratch in an area that the public has a legitimate interest in' [Stakeholder]*. This feeds into the public accountability driver for PIs. It is important therefore that PIs measure areas of public policy, areas that institutions should be responding to and seeking to improve, and arguably not just areas where institutions might want to compare themselves.

3.4 Positive attributes of PIs

There was strong support for publicly measuring the performance of the sector and across the sector at individual institution level, and more precisely an appetite for PIs. This was also evidenced in the work of HEFCE (2008), and is reflected in the findings of the 2006-07 review, HEFCE (2007), with four-fifths of institutions favouring PIs as a source of comparable information. This is part of the open and transparent approach to public policy-making. Interviewees felt there was a continued need for an official, robust and objective set of indicators that is UK-wide; and that this was perhaps even more pressing in the changed context for HE.

3.4.1 Key strengths of the current PIs approach

'They allow for comparisons across a UK-wide perspective, and they present the sector as a whole, but allow you to understand differences between institutions. It's the authoritative source… They are quality assured from people that are widely trusted.' [Sector stakeholder]

PIs are viewed as '*a force for good' [Sector stakeholder].* The stakeholder interviews and consultation responses identified seven key strengths of the PI approach as a way of measuring performance and profile.

1. They are credible, legitimate, and independent, as they were developed for the sector in consultation with the sector, rather than by individual institutions, and have been produced by a credible and trusted organisation.

2. They have a UK-wide coverage and perspective providing as standard an aggregate picture of UK HE.

3. They allow institutions to benchmark themselves against institutions across all four nations with a high degree of reliability, and the benchmarks provided take account of context, comparing institutions in a fair way to each other (using objective groupings of institutions, and comparing like with like).

4. They are evidence-based and statistically robust, due to the use of consistent definitions, and use of high volume and high quality data that are collected in a consistent and fair way across the sector. They also utilise a transparent (although sometimes complex) methodology which gives users a clear sense of what concepts such as widening participation and non-continuation mean.

5. They have been established and largely unchanged for some time, giving them a longevity/continuity enabling a time series to be developed and the ability for users to conduct longitudinal analysis.

6. They are free and available to all.

7. They provide measures not targets, measures that are not directly linked to funding behaviour or presented as institutional rankings.

However there are several criticisms levelled at PIs and interviewees felt they were ripe for review. Some of these criticisms are related to the notion of PIs in the rapidly changing context of HE and have been presented in Chapter 2, others relate more to the PI approach and the current set of PIs and are addressed in Chapter 4.

3.4.2 Distinctive features

There were discussions about what makes a good PI and stakeholders felt that a good PI has the following distinctive features:

- Measures what is important to the widest audience
- Has a stable and credible methodology, and should remain consistent over time
- Presents processed and contextualised information that allows for interpretation and understanding
- Provides an authoritative reference point for UK HE, presenting our performance to global markets

- Adds value by providing individualised benchmarks
- Provides information that has not been made available elsewhere, rather than replicating existing robust data
- Sits within a wider basket of quantitative and qualitative measures available to sector stakeholders to allow for triangulation, and therefore does not attempt to quantify and standardise all aspects of HE (just the aspects that are strategically important)
- Makes use of available data rather than burdening institutions with additional data collection.

Several stakeholders held very strong views that the value and costs of producing PIs should be balanced:

> *'There are advantages in having a common set of standards but you always need to temper that against the work that actually goes into collecting and creating and presenting this information... I think institutions accept that they need to be providing a certain volume of information but they want to be confident that the information is being used and it is valued and has a purpose; and that the value and usage of that information outweighs the cost of producing it.' [Sector stakeholder]*

These reported strengths and distinctive features go some way towards developing a set of principles or standards for PIs (see section 7.2) and they align with the principles for operation and criteria for assessment of suitability agreed in the 2006 review of the PIs (HEFCE, 2007). They also correspond closely to the set of principles guiding the development of performance funding indicators in other countries (eg Australia, DEEWR, 2009).

4 Amending the focus and coverage of the existing PIs

One of the key difficulties with performance measurement is defining what exactly gets measured. Common threads running throughout the discussions with stakeholders were: firstly, the importance of measuring the aspects that matter rather than those which are easy to measure; and, secondly, the danger of seeing what is measured as important. As noted earlier, as part of their role in developing and assessing policy and in setting expected standards, the PIs add legitimacy and raise the profile of an aspect of HE; and this aspect may or may not be important. They therefore have a signalling role, which highlights the importance of getting the PIs right and keeping them current:

> *'We are very aware that the selection of indicators we put out as being our PIs for the sector then really set the tone and expectations for what universities are about. So there is a signalling purpose there when you come around to actually selecting what should be in the indicators... You take a set of PIs and they highlight what we think are important, and the fact that there aren't equivalent indicators for some of the important areas of activity means that, in some instances, perhaps the position and appreciation of what is happening isn't there to the same degree... PIs do have a life of their own in that respect which we have to be careful about.' [Sector stakeholder]*

4.1 Critique of existing PIs

The interviews and online consultation responses indicated that in general the areas or themes covered by the current PIs still matter, and still matter to all as they relate to the outcomes that HE seeks to achieve: widening participation, retention and employment. Social mobility/social justice, fair access and employability continue to be a policy focus for HE across the UK nations as evidenced by White Papers, strategy documents and instructions from government to sector agencies. Additionally, these are also key to most institutions, wherever their location, as evidenced by institutions' own strategy and planning documents (including for example, Access Agreements in England, Fee Plans in Wales and Outcome Agreements in Scotland), and their own sets of Key Performance Indicators (KPIs).

There was a common (but not universal) perception that the current research PIs have less interest and are under-used, and instead the Research Assessment Exercise (RAE) and the new Research Evaluation Framework (REF) are more commonly used by the sector. However research continues to be part of the central mission for many institutions and so there is scope to re-evaluate this PI.

Overall, the stakeholders involved in the review wanted to keep the existing PI areas. However stakeholders (both interviewees and contributors to the consultation) were somewhat critical of the actual measures used and so felt these could be refined and refocused. There was also a desire to broaden the population covered by the PIs (to cover other types of students, types of providers and types of learning delivery) and to be able to dig deeper into the figures to identify performance measures for specific student groups and for units within institutions.

4.2 Criticisms of the current PIs approach and suggestions for improvement

Stakeholders had a number of issues with the current set of PIs and they felt this review was useful as it gave them a chance to revisit the coverage and topic areas, and to feed back perceived weaknesses of the PIs to try and ensure more accurate and relevant measures. The three main areas of general criticism are noted below. It is interesting to note that several criticisms or weaknesses identified by some stakeholders contrasted directly to the features listed as strengths (noted above in section 3.4) by other stakeholders.

Narrow coverage – desire to broaden coverage

Firstly, PIs were perceived to have a narrow coverage, and were biased towards undergraduate full-time first degree home students, young school leavers, and the traditional notion of university participation. The presiding view among stakeholders (sector stakeholders and providers) was that the PIs should be able to capture the diversity in the student body more effectively, ensuring that 'less typical' groups of students were better represented. Stakeholders felt that other student groups should be included in the population covered by the PIs, such as: postgraduates (characterised as the 'new frontier for widening participation'), part-time students, EU and international students, and students studying in UK HEI campuses overseas. Similarly, stakeholders felt that the full range of provision was not covered by the PIs, with the focus solely on publicly funded HEIs. There was a strong desire for all institutions including further education colleges (FECs) and alternative or private providers to submit information and be included in the PIs and thus create a level playing field. A level playing field, helped by the statistical adjustments, is considered to be a strong positive aspect to PIs, and it was felt that being part of the PIs adds legitimacy and credibility to an institution, bringing in aspects of provision that may feel overlooked or ignored.

> *'I think we've got a partial picture... We are missing a chunk of information about HE provision in the UK at the moment, and unless that is brought into the whole UK picture we will be getting a skewed view of what is actually happening. That will mean policy is developed, interventions are developed that are potentially only applicable to the traditional sector and not applicable to the full range of provision we have.' [Sector stakeholder]*

Stakeholders did acknowledge that the ability to broaden the coverage of the PIs was dependent not only upon data availability but also data reliability and the ability to maintain confidentiality. They recognised that these data will be challenging to collect and also present in useful ways due to the smaller numbers of students in these additional groups and/or the degree of heterogeneity within these groups. It may also be challenging to encourage different types of providers to collect and return data as they may not have the capacity or the desire to do so, and there would be additional challenges around standardisation, contextualisation, reliability and presentation of data. At present, FECs collect a wide range of data for: the Individualised Learner Record returns they make to the Information Authority; for their own performance indicators; and for the Higher Education in Further Education Students Survey (HEIFES)[5]. However large private providers will only be required to submit returns on their students on full-time designated courses (a small part of their provision) for the first time for the 2013-14 academic year.

'Usability' of data – desire for deepening the analysis

Secondly, some stakeholders were critical of the rigid/inflexible nature of the data which meant that they could not easily be used for further analysis, linked to other data or further explored in order to better understand differences between student groups and also differences between and within institutions. These stakeholders wanted finer differentiation of the data rather than necessarily the development of new focused indicators. The existing PIs do consider some aspects of student make-up (socio-economic background and disability) but other potentially low-participation groups, key equality groups or those with 'protected characteristics' are not identified. Stakeholders felt there would be benefits to be able to identify/separate out groups of students felt to face particular challenges and to examine how they fare in terms of the areas covered by the PIs (current areas and any new areas identified).

There was also a desire to undertake more detailed analysis and comparison within institutions rather than at an aggregate 'whole institution' level. Institutions want to be able to: examine absolute and relative performance at school, department, subject or even course level; to undertake more complex, fine-grained or nuanced analysis and comparison against peer and competitor groups at these levels; and to be able to determine their own comparator groups. Some institutions have invested significantly in time, resource and capability to use the PI data and that available via the Higher Education Information Database for Institutions (HEIDI) and HESA to undertake sophisticated analysis and attempt to create additional benchmarks (often around their own KPIs (see section 6.2.1), mapping/aligning these against their institutional structures. Feedback indicates that institutions generally find PIs and benchmarks at programme level (where possible to derive), rather than at an institution level, are the most useful in terms of helping to identify areas of concern, and putting in place strategies.

These types of analysis (student group investigation and unit/subject based benchmarking) are challenging at present but the planned developments in the functionality of the HEIDI[6] web-based management information tool (based on the PI

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5 This is the HEFCE annual survey of students on recognised HE courses completed by FECs

6 HEIDI is produced by HESA. It is available free of charge to all member institutions and at a relatively modest subscription rate for relevant publicly funded HE stakeholder bodies. It provides a wealth of management information from across the HESA data streams in a one stop shop including: student record, staff record, finance return, destinations survey, HE Business and Community Interaction survey (HE-BCI), and Estates Management Statistics. It also includes data from other sources such as: UCAS application data, RAE data and National Student Survey (NSS) data. PI data at institutional level is available within HEIDI but the underlying dataset – that enables further subject-based analysis – is currently available as an ad-hoc dataset at a cost. The HEIDI tool allows institutions to carry out additional analysis and generate tailored reports, and to create their own sets of indicators. They can also produce

benchmark methodology) will allow institutions to create their own benchmarks in a localised bespoke context – for different performance measures, for units of analysis within institutions (such as principal subject level), and for bespoke comparator groups. This means that stakeholders will be able to undertake finer differentiation of the data and more customised benchmarking without making changes to the PIs.

Complexity - potential for misunderstanding and misuse

Stakeholders felt the methodology underpinning the benchmarks was sophisticated but complex which leads to a lack of understanding and potential misuse of the data (see also sections 3.3 and 6.2.3). These criticisms were often discussed in reference to league tables. Additional criticism of the methodology centred on the definitions used (some of which were felt to be unclear), the desire to take account of further factors in calculating the benchmarks, differences between delivering and registering institutions, and small base sizes for some measures (eg the disabled students measure). Some online contributors raised concerns about the robustness of data and the validity of benchmarks, which they felt could lead to invalid comparisons between organisations across a disparate sector. Other institutional stakeholders commented on how PIs largely provide historic snapshots which means they have to make comparisons and decisions and base their plans on past performance (which in some cases is two years old). However it was recognised that more ‘current’ data could be commercially sensitive and institutions would therefore be reluctant to share this.

There may be work here to improve understanding of the methodology (rather than change it) in order to increase and improve the use of the PIs. There may also be benefits to making the benchmarks more accessible through greater use of visual/graphical representation (see also section 6.3).

4.3 Criticisms of the current PIs and suggestions for improvement

Criticisms were also levelled at specific PIs.

- **Employment indicator**: Employability was considered to be an important area for an indicator but the current employment indicator was criticised for looking at graduates in employment and/or in further study at six months, which was felt to be too short a time-frame for a graduate to make an effective transition. Student journeys to employment are becoming more protracted, with graduates more likely to take time out or pursue work experience or internships before entering employment. The current PI was felt to be a measure of how organised students are in terms of finding work at the end of their degrees as opposed to a real measure of their employment destinations. The PI was also criticised for taking no account of the quality of employment, for example whether individuals were in a graduate job (itself a contentious issue with no agreed definition).
- **Research indicator**: The research PI was criticised for not focusing on innovation or knowledge exploitation or on the quality of research outputs, and was felt to be under-used.

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reports setting the national PIs values alongside other metrics for their own institution and other institutions

- **Non-continuation indicators**: The projected outcomes PI was criticised for being difficult to explain and defend as it is based on projections, and for being too complex, leading to confusion. The non-continuation PI, which looks at continuation from the first year of study into the second, was criticised for being too narrowly focused, as it does not look at success or outcomes.

- **Widening participation indicators:** This group of PIs received the most criticism, although arguably these measures were the most widely used, and the majority of those consulted felt the area was important and appreciated that there are a number (or basket) of measures available. Criticisms focused on: a) using measures of under-representation based on geography (the Low Participation Neighbourhood measure POLAR) that are not appropriate in Wales, Northern Ireland or Scotland[7]; b) using the National Statistics Socio-economic Classification (NS-SEC) which is a self-reported measure and thus open to misreporting, prone to inaccurate coding and has a relatively high volume of missing data; c) using state school as an indicator which is seen as a blunt measure as it groups all state school pupils together in one category and is thus a poor proxy for disadvantaged background; and d) using Disabled Students' Allowance (DSA) data as an indicator of disability as it under-counts the actual number of students with disabilities.

[7] Scotland has far fewer low-participation areas and so instead has created its own measures using the Scottish Index of Multiple Deprivation (SIMD); and in Wales, the appropriate measure is areas defined as Communities First areas, as these link in with the HEFCW corporate strategy

5 Potential new areas for PIs

'We're measuring what we can measure, and it's quite narrow, and it's not presenting how transformative a lot of the things we do are, with individuals and communities.' [Provider]

Stakeholders wanted to keep the focus on the existing PI areas but felt these were somewhat limited and did not reflect the full range of HE sector activity nor the full student life-cycle. Stakeholders were therefore not averse to the creation and introduction of a limited number of new PIs, particularly given the amount of data currently available, which could support more intelligent, evidence-based decision making. Stakeholders suggested additional areas for new PIs which they felt might future-proof the PIs (to measure success in a future that will look very different) and ensure focus was given to relevant issues in the rapidly changing context of HE. These largely fell into two groups: areas that are already subject to measurement but currently not part of the UK PI set; and new areas of policy concern that are not yet subject to any standardised measurement.

5.1 The potential to elevate existing measures to PIs

Some areas suggested for potential new PIs are already captured in the data available to institutions and to other stakeholders but do not currently feature as part of the set of UK PIs. These include the areas of:

- estates stocks and utilisation, and infrastructure (including staffing)
- environmental sustainability and carbon footprint
- individual student attainment/achievement
- Welsh language provision (for Wales only).

These often feature in institutions' own measures and their own benchmarking activity, in other measures such as the Key Information Set (KIS) or in league tables (see Chapter 6); but there appears to be no strong feeling that these should be elevated to become publicly available PIs with associated benchmarks. Instead the discussions tended to focus on why these were not already PIs (which involved assessing them against the perceived core mission of institutions), whether they would be used and or useful if they were elevated to PI status (could they improve decision-making, positively direct performance and enhance behaviour), and who they would be aimed at. It was acknowledged, however, that given the level of existing data a structure for a PI in any of these areas could be developed and could be embedded relatively quickly.

Two other areas were also suggested:

- Finance and institutional **financial sustainability** and/or broader measures of institutional health and administrative efficiency. This is important given the changes in funding across the sector. Arguably the public have a right to know whether a particular institution is financially sustainable, and given the level of investment that students are now required to make, prospective students have a right to know whether they are making a safe investment.
- **Quality of teaching**/academic quality and aspects of the student experience. This is important given the centrality of teaching to the mission of the majority of providers and the importance of teaching quality as a factor in prospective students' decisions when selecting what and where to study.

These two areas – financial sustainability and teaching quality – were important but the most contentious, and there was little consensus about what aspects of these areas should be captured and what data could or should be used to develop metrics. Stakeholders felt measures focused on financial sustainability at individual institution level would not be appropriate for wider public consumption and that it would be difficult to ensure comparability across the four nations given their different funding mechanisms. Additionally, developing a public metric in this area may lead to providers being unwilling to share financial details and publishing data on financial viability might compound an institution's financial troubles by serving to dissuade potential applicants. In terms of teaching quality, stakeholders suggested a number of potential aspects that could be used such as: class size, staff/student ratios, contact hours and/or interaction with academic staff, per capita spend on learning resources, and student satisfaction. Data already exist for some of these aspects but there were concerns about how well these concepts were defined and thus how robust and objective any measure would be, and that public metrics in this area, given its interest to prospective students, could be used in institution ranking without proper explanation and contextualisation. There was no particular measure that was preferred above others, although stakeholders were interested in the potential for a measure around student engagement (with education and the wider student experience) which would require additional data collection.

5.2 Developing PIs to measure new(er) concepts

A range of other areas were suggested that could be the focus of new PIs, areas that aligned with more recent policy interests and developments and institutional activities. These were recognised as useful concepts though challenging in that they were difficult to define and particularly to measure, but there was a feeling that the sector should not just be attracted to measuring that which is easy to measure. These new areas included the following.

- Covering the broader HE cycle from recruitment (access and enrolment), through in-course progression, and learning and development in key areas (eg independence and critical thinking), to graduate outcomes (rather than just outputs). The latter could include aspects such as the 'graduate bonus'/'graduate premium'[8], the percentage in a

[8] For example, this is defined by Conlon and Patrignani (2011) as: Gross graduate premium/net lifetime benefit – the present value of the after-tax (and National Insurance/VAT) earnings benefits associated with an undergraduate degree relative to an individual in possession of two or more GCE 'A' Levels; and Net graduate premium – the present value of the benefits associated with an undergraduate degree relative to an individual in possession of two or more

'graduate job', and whether those from disadvantaged groups are gaining graduate level employment.

- Understanding the extent and nature of employer engagement/working with businesses and employers, to capture links with employers, in order to inform national policies and to link with the broader skills agenda.
- Measuring international outlook/links including international recruitment, extent of trans-national education, and the experiences and outcomes of overseas students.

5.2.1 Value-added

The most frequently discussed area or concept was 'value-added'. This was a common thread across all aspects of the review, and was felt to be missing from the current set of PIs. However this is a broad concept that appears to have four dimensions (see Figure 5.1):

Figure 5.1: Four dimensions of value-added

	Individual	Wider sector
Non-financial	Distance travelled	Social good
Financial	Return on investment/ value for money	Economic impact

Source: IES/NatCen, 2013

1. An individual student level dimension of **distance travelled.** This differs from measures of participation as it takes account of where a person has come from (characteristics on entry) and also where they go to (academic success at the end of the course or beyond). Stakeholders felt that the current student outcome measures (particularly destinations and achievement) could be improved by looking at 'distance travelled'. These ideas fit with those of Johnes (1992), and more recently those of Gibbs (2010) who suggested that indicators should look to capture in which universities students

GCE 'A' Levels (gross graduate premium) minus the present value of the costs associated with acquiring a degree. These costs include the direct costs (such as tuition fees minus student support) and indirect costs (such as foregone earnings).

gain the most knowledge in relation to their starting place and where the most human capital was added ('educational gain'). These authors suggest this is a fairer measure of how well a university performs, arguing that performance indicators such as attrition rates, graduation rates or graduate distribution are only proxies and do not take account of the widely differing characteristics of student bodies.

Providers and their representatives tended to be less supportive of a PI around distance-travelled than other stakeholders such as funders and bodies representing students.

2. An individual financial dimension of **return on investment** – the value to the individual of obtaining a degree which is closely linked to the concept of the graduate premium. This has arguably become more important with the shift in funding in many of the UK nations towards the individual student. Stakeholders discussed the concept of a measure that considers the individual financial value of having a degree such as increased earnings and/or improved employment opportunities over the life-course, often referred to as the graduate premium.

   Again providers and their representatives were less supportive of a measure that would provide the financial value of obtaining a degree from a particular institution. Other sector stakeholders, such as funders and student bodies, tended to be more supportive. This latter group felt that data would need to be collected at an institutional level in order to build up the picture at sector level, and that an institutional level PI would help to assess which providers are really offering 'value-added' and what lessons could be learned from these.

3. A wider sector-level financial dimension of **economic impact**, essentially the value of an institution to its local economy, wider region and to the UK economy. It was generally felt that HE makes an important financial contribution to the UK economy, and an indicator in this area could help to articulate this point both to the government and the general public. There was strong support for a sectoral measure of economic impact: 'big impact measures' such as the value of universities as employers and service contractors (employment creation), the value that graduates bring to the economy in terms of tax revenue and the economic value that student populations bring to local areas; and 'smaller impact measures' such as the economic value of universities' research and university-business interactions including knowledge transfer, innovation exploitation, and spin-out companies. Some of this information is currently available, for example, from sources such as the Higher Education Business and Community Interaction (HE-BCI) survey which provides information about revenue generated from research and enterprise creation.

   Providers were in general less supportive of institutional level measures around economic impact which they felt would be unhelpful.

4. A wider societal dimension of **social good**/contribution – softer outcome measures that capture the broader societal and cultural dimensions of HE activity and the benefit of these to the public. This involves: engaging with schools and community groups, the volunteering activities of staff and students, ensuring university employees come from the local community, giving public lectures, arts performances/events, hosting exhibitions, research influence on policy and providing open access to research. Some of these activities are already monitored, as they are captured by the HE-BCI data, though not formally as a PI.

   Providers questioned the value of creating a PI in this area, as although important, community engagement and social outreach activities (beyond the activities already covered under the existing widening participation PIs) do not tend to be central to their core mission nor seen as part of their central purpose and the scope of activity in this area varies widely between institutions.

Summarising the challenges with value-added measures

Providers are generally less supportive than sector stakeholders of having value-added measures. They appear willing to support sector level measures but are averse to the creation of institutional level indicators (with or without benchmarks), raising seven key concerns.

1. **Measurability:** whether it is possible or meaningful to boil the concepts down into simple metrics that would reflect the dimensions of value-added and be relevant across the sector given the ‘individual’ nature of institutions.

2. **Data collection and reliability**: difficulties in capturing relevant data and the reliability of data used in terms of accuracy, timeliness, and completeness/coverage.

3. **Comparability**: how one would be able to contextualise the measures to make them understandable and also useful in terms of being able to compare similar institutions. The challenge of comparability between institutions and over time was a particular concern for institutions.

4. **Transparency**: the implications of making information in these areas publicly available through the PIs. There is a tension between having public and transparent information to enable positioning/benchmarking which will help institutions with their performance management and developing long-term strategies; and providing information that could be perceived as commercially sensitive/strategically useful in an increasingly competitive ‘market’ or information that could be used in ranking activity/league tables that could damage reputation. For example, indicators around distance travelled are currently used widely in existing university league tables.

5. **Attributability**: that PIs in these areas at institutional level would reflect the characteristics of individual institutions or broader external factors beyond the control of institutions (in the case of economic impact) rather than their actual performance.

6. **Negative influence on behaviour**: that PIs at institutional level could lead to perverse institutional behaviour. For example, incentivising institutions to focus more on measurable activities and outcomes to the detriment of other activities which are less measurable but worthwhile, or lead to activities being encouraged (whether useful to the student or not) or re-branded to be counted within measures.

7. **Significance:** whether there is a real value in creating a PI in these areas, in terms of measuring something that is or is not central to the core mission or central purpose of institutions.

These concerns are also useful in developing the set of guiding principles for PIs.

Despite provider concerns, wider sector stakeholders were keen for these value-added areas to be explored as potential PIs. The areas are worthy of additional examination through further feasibility research although the concerns of providers need to be fully explored and accounted for. Sector stakeholders look to HESA to provide the authoritative voice on what aspects of these concepts should be measured and how things should be measured, for example what is meant by a graduate job, so HESA should play a key role in any feasibility research.

6 Users and uses of measures

> *'I think all the Performance Indicators that are there are probably quite useful but what they're useful for is that they're a way in to discussing, considering, analysing a particular issue. They shouldn't be used as an end in themselves... the main point is you need a narrative. The stats on their own don't tell you very much... it is about the questions you ask and how you interrogate the stats, but they are useful as a starting point.' [Sector stakeholder]*

Stakeholders reported a broad range of bodies, organisations and institutions that make at least some current use of the current PIs. Feedback from this review indicates that the audience includes three distinct groups:

- Government (representing the wider public) – this group includes: political parties (including Ministers); government departments (including those with policy responsibility, in press and communication roles and analysts); policy bodies and the agents of government including funding councils, research councils, and the Quality Assurance Agency (QAA). These are the key stakeholders for whom PIs are primarily produced.
- UK providers and their agents – this group includes: the bodies representing institutions such as Universities UK, Universities Scotland and Higher Education Wales, as well as individual institutions. These are the primary user group of PIs.
  - Currently, institutional users are largely confined to publicly funded HEIs as FECs (including those with HE level provision) and alternative/private providers are not included in these measures directly and as a consequence have considerably less engagement with the PIs.
  - Among institutional users, PIs had a range of internal audiences. These included Boards of Governors, senior management (including registry, planners, finance directors), specialist teams (such as those responsible for widening participation or for research), those responsible for the Access Agreements, Outcome Agreements or Fee Plans, and press and communications teams. Other audiences linked with providers could include banks (with whom the institution has an investment relationship), local communities, and their student body. Institutions may well feel that they have to present their PI results differently to their different internal and external audiences, and use a range of media to communicate the data such as their website, specific tailored reports or via their prospectuses.

- Others – this broad group includes the following subsets:
  - Private sector organisations who might invest in institutions who show promise including graduate recruiters, bodies representing employers, and professional or trade bodies
  - Academics, researchers, consultants, and students (undergraduate and postgraduate) undertaking research
  - International providers, overseas governments and international organisations concerned with education (such as the Organisation for Economic Co-operation and Development, OECD)
  - Private information providers such as *Which*, and *Best Course for Me*
  - The press, as the strong press interest gives the PIs a major public profile and allows them to reach a wider audience beyond the sector.

6.1 PIs are not appropriate for all potential audiences

There was some degree of agreement between the existing users of the PIs about who these measures would not be useful or appropriate for. It was acknowledged that the PIs are a specialist tool and may not be useful or appropriate for all without mediation or interpretation; and that some potential audiences will struggle with the underlying concepts, rules, definitions and methodology (which as noted earlier in Chapter 4 are sophisticated but sometimes complex).

Stakeholders discussed whether prospective students and their sponsors, existing students, and schools should be part of the current or future audience for the PIs (as indicated by the HEFCE guide, 2003b). These groups are becoming increasingly interested in employability and the credibility of institutions, and becoming '*increasingly astute evaluators and consumers*'. They are considered important stakeholders in the sector given the policy interest in putting students at the heart of HE, the push to improve the quality and standardise the information given to potential students to inform student choice, and the interest in progression pathways from school to HE.

On balance these groups were not felt to be a direct audience of PIs as they may not pick up on the nuances inherent in the data. Instead the information contained in PIs would need to be filtered, so they could be disseminated to students indirectly though mediating bodies. This already happens to a certain extent, though in an uncontrolled manner, via the league tables produced by the press; and league tables were felt to have quite a strong and often undesirable influence on prospective students (see section 6.2.3). More work could be done here by intermediaries in order to counteract the league table effect and interpret and present the whole range of PI data in materials and products aimed at supporting choice.

Prospective students, students and their sponsors now have very well developed measures/statistics that have been primarily produced for them in order to support choices, and much of this information is provided at individual programme/course level.

These student focused materials include the Unistats search and comparison website which presents the KIS[9]; and the NSS[10]. PIs are therefore not needed for this audience.

6.2 Uses of PIs

As noted above, different stakeholders (or user groups) will have a different use for the PIs, however much of the stakeholder discussions focused on how institutions use the PIs as these were perceived to be the primary users.

6.2.1 Use by institutions

Supporting strategic and operational planning, and performance management

The feedback from stakeholders (including providers) illustrates that those providing HE use the PIs and benchmarks directly or indirectly for their own strategic planning, resource allocation and efficiency drives, formulation of policy and procedures especially around student engagement, and in internal performance management processes to guide improvements in student learning and the student experience. The PIs help them to clarify and codify priorities and PIs are used in absolute or relative terms to set internal goals or targets at aggregate level and at academic and support unit level within institutions (and thus used to monitor performance as part of the annual review process). This fits with findings from the 2006-07 review of PIs (HEFCE, 2007).

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9 KIS/Unistats was developed from the Teaching Quality Information (TQI) set of measures, which have been refined, refocused on prospective students as the primary audience and re-launched to provide up-to-date information about the quality and standards of provision to enable potential students and their advisers make informed decisions about HE (QAFRG, 2006; Oakleigh et al., 2010). Substantial work has been undertaken to market this tool widely, and make it more accessible and user friendly (the previous TQI was criticised for being poorly set out, using complex language and technical terms and therefore difficult for a lay audience to understand, QAFRG, 2006). The KIS now provides data on: student satisfaction (from NSS), student destinations on finishing their course, how the course is taught and study patterns, how the course is assessed, course accreditation, and study costs (including tuition fees and costs of accommodation). This covers a wider range of measures/information than currently captured by the PIs, and includes both qualitative and quantitative data, but there is some small overlap (ie destinations).

10 The NSS differs significantly to the PIs as it is survey-based and therefore subjective data. Introduced in 2005, it is a survey of final-year students on undergraduate programmes. It is compulsory for publicly funded HE providers in England, Wales and Northern Ireland. From 2013 onwards Scottish universities are required to take part to comply with KIS. Some institutions have been given time for the transition but Scottish colleges are not however required to take part. The NSS draws on the successful Australian Course Experience Questionnaire (CEQ) and rates finalists' satisfaction in six areas: quality of teaching and learning; assessment and feedback; academic support; organisation and management; learning resources; and personal development. It was designed to assist prospective students in making choices; but was also introduced as a source of data for public accountability and to assist institutions in quality enhancement activities (Sharpe, 2007; Buckley, 2012). Results from the NSS feature in the league tables produced by *The Guardian*, *The Times*, and *The Sunday Times* (accounting for around 15-17 per cent of the total weighted in each of the tables; HEFCE, 2008).

However the degree to which institutions use or draw on each of the indicators within the PI set for measuring performance varies between and within institutions depending on the aspects that are considered important. For internal performance management, enhancement and improvement, providers will tend to make most use of the PIs covering the areas in which they feel they could or should improve, and/or align most closely with their core mission and values, whereas for student recruitment, marketing and communications activities, institutions may instead focus on the PIs where they perform well or have shown improvement, using PI data proactively to promote success.

English institutions also draw heavily on the widening participation PIs when developing their Access Agreements with OFFA to monitor performance, set targets for future performance, and inform decisions about appropriate levels of spending on access measures. Estimations from OFFA are that at least 80 per cent of institutions in England use at least one PI as a basis to set their targets. Institutions therefore appear to be following the guidance from OFFA which recommends institutions refer to PIs to help identify gaps in performance and highlight key areas for improvement, and inform access and student success strategy (OFFA, 2013). There are indications that Scottish institutions are also using the PIs (along with other measures) in the new Outcome Agreements agreed with the Scottish Funding Council. Other guidance suggests that PIs could be used to support institutional audits (QAA, 2008).

Developing key performance indicators

The majority of, if not all, institutions also have their own internal set of tailored KPIs. These can be costly to produce but are a key part of institutions' strategic management processes (CUC 2008). They relate much more directly to their goals/mission and strategic vision, and these too are used in strategic/corporate planning. The term 'performance indicator' can therefore cause some confusion as there are many sets of indicators. Institutions tend to have a sophisticated suite of KPIs, often drawing on the HEIDI data from HESA alongside their own management information to produce comprehensive and regular data to support these. These KPIs provide institutions with a wider focus than the strategic priorities of the nation(s) captured by the PIs, and cover a very broad range of issues necessary for institutions to manage their performance internally and to judge how they are performing (both at institution- and individual department/course-level). KPIs can include one or several of the UK PIs, however, there was a very clear distinction drawn by providers between their KPIs and the UK PIs, with the latter more about public accountability and/or measuring the worth of the HE sector. KPIs can cover areas of performance such as the academic profile of the institution and teaching and learning indicators, as well as more commercial criteria like the financial health of the institution, their current portfolio of assets and their environmental impact (see *Part Two: The evidence report* for a full discussion of the areas covered by KPIs – sections 2.4, 3.3.2 and 4.2.1). These closely align with the Committee of University Chairs (CUC)/HEFCE guidance (2006)[11] and almost exactly replicate the areas suggested and discussed as potential new PIs (Chapter 5).

[11] The guidance provided a tentative framework, which detailed ten broad areas of institutional performance: two Super KPIs: institutional sustainability; and academic profile and market position; and eight top level indicators of institutional health: the student experience and teaching and learning; research; knowledge transfer and relationships; financial health; estates and infrastructure; staff and human resource development; governance, leadership and management; and institutional projects (CUC, 2006).

Benchmarking

Institutions also undertake benchmarking, and the 2006-07 review found this to be the most common use of PIs (HEFCE, 2007). Providers trust and appreciate the PIs and the benchmarks, and use these to establish their competitors and to compare their relative performance with different institutions (their competitors, their peer group, and their geographical neighbours) to see whether their performance is typical or diverging. Institutions also use the PI benchmarks to compare their own performance over time to assess their direction of travel, creating additional benchmarks at levels within their organisation. This activity enables them to identify areas of concern and then informs actions and interventions. HESA in its 'Benchmarking to Improve Efficiency – Status Report' suggest that this comparison activity can then lead to finding best practices and learning from other institutions perhaps through direct comparison, and so PIs may themselves be only the starting point for further enquiry about performance (HESA, 2010).

Influence on institution behaviour

Stakeholders acknowledged that PIs are not neutral in the HE system and so they can and do influence behaviour. Putting the PI and benchmark data in the public domain leads to examination from peers and wider public scrutiny; this can affect a provider's reputation, which in turn can lead to institutions taking some kind of action. Stakeholders spoke about how media coverage can create 'leverage' both internally and externally to address issues – to explore under-performance, find out the factors behind this and work to influence performance. PIs are felt to influence institutions' behaviour particularly when they are linked in with their internal performance management processes as this allows institutions to own the change process and work proactively rather than reactively to external pressures. However stakeholders felt other measures such as the NSS and particularly published league tables (see below) were felt to have a greater public profile and so, rightly or wrongly, to have a greater impact.

Stakeholders felt that the actions and behaviour change resulting from PIs, benchmarks and other published measures may not always be deemed positive. In some cases it can be benign – essentially no action due to complacency around indicators in which institutions are at or above their benchmark value and this could limit progress. At worse it can be negative either due to unintended consequences or due to game-playing or data-manipulation. There were concerns expressed that if PIs were used for external accountability and explicitly linked to funding then this would create perverse incentives and could lead to potentially damaging behaviour that would not benefit the learner – such as skewing behaviour to maximise funding rather than focus on the student experience, or changing regulations to improve retention at the expense of flexibility. The literature also suggests some cynicism about the real influence of PIs as a positive force. Johnes (1992: 23), for example, notes that according to Goodhart's law, once a variable is chosen as a PI, that variable becomes subject to manipulation by the monitored institution and thus loses its reliability.

6.2.2 Use by wider sector stakeholders

PIs are also used by other stakeholders for a number of purposes (closely linked to the sectoral drivers for PIs outlined in Chapter 3). PIs are used as strategic indicators to answer questions about the worth and value of the sector as a whole. PIs are often used in conjunction with other measures, data and feedback, rather than in isolation, and used as a starting point for further action and interaction with institutions and other stakeholders. Specific examples of uses mentioned include to:

- evidence the value of the sector to the economy and justify the continued public investment, including producing Ministerial Briefings and responding to press coverage; and evidence the value of particular activities of the sector such as research in order to benefit from further research funding and attract academic researchers
- officially measure the performance of the sector nationally, as part of a duty to both regulate the sector and to support the sector – to see if and where progress is being made, whilst reducing the burden of data collection on individual institutions
- help shape government policy and make appropriate policy decisions, for example about making changes to the student support system
- provide an overview of the performance of the sector and of individual institutions on key issues in order to provide the context for communication: for quality assurance discussions with individual institutions, to provoke discussions about key issues and/or provide evidence as a basis to lobby for improvements. For example the PI data have informed the debate on social mobility in the UK to highlight the relatively low proportion of students from the most socially disadvantaged backgrounds attending the most selective universities (Millburn, 2012; and Social Mobility and Child Poverty Commission, 2013)
- look at particular subjects within HE and how these feed into the labour market
- respond to press coverage and enquiries.

However, the government departments in the four nations appear to develop and use different indicators to measure the performance of their HE sector rather than rely on the PIs. This caused some confusion and also concern about whether there was a sense of mutual ownership of the PIs, in and across the four nations.

6.2.3 Use by the press – influence of league tables

PIs are attractive to the press as they are produced regularly, published at a fixed time each year, and allow comparisons to be made between institutions. They are therefore reported on directly and widely in the public media and also indirectly, along with other data, in published league tables. There is some, albeit minor, overlap between the league table indicators and the PIs – with some of the most well-known league tables[12] including data on graduate prospects, research assessment and completion data. However league tables can also provide alternative measures for areas covered by the PIs which can cause confusion and they currently present a wider set of information than that included in PIs. The literature suggests that the relationship between performance indicators and league tables is in some ways symbiotic. League tables grew out of a perceived lack of officially published information about institutions and they are perceived to fill a (continuing) information gap on institutional performance. However the development of league tables, based on less technically sound methods and less reliable statistics, is put forward as an argument in favour of sector-produced performance indicators (Goldstein and Foley, 2012; Brown, 2012).

Stakeholders raised concerns around the use or misuse of PIs by the press, particularly that the media can interpret benchmarks as targets. It was felt that the press tend to focus on the widening participation and non-continuation PIs and benchmarks and use these to

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[12] The most well known are produced by: *The Times* (first produced in 1992), *The Sunday Times* (launched in 1998) and *The Guardian* (in 1999).

critique the sector in a detrimental way. Similarly the press can use PIs to create institutional rankings via league tables. League tables are much criticised in the academic literature (see *Part Two: The evidence report* 2.5.4) and stakeholders dislike them, yet league tables appear to play a greater role in the strategic planning processes of institutions than the PIs due to their perceived legitimacy and prominence in the public eye – particularly among (traditional) prospective students and graduate recruiters. Stakeholders spoke of how they have to respond to press attention in the PIs and to the publication of league tables. The impact of league tables on institutional decision-making was noted in the work of Hazelkorn (2007) but research by HEFCE (2008) suggested that league tables were not driving institutions' agendas but were giving impetus to change that would have occurred anyway.

> *'They are a feature of life whether we like them or not and so their methodology is very non trivial. We have to watch them very closely, so we have a working group that pretty much does nothing but monitor how our performance, how our own data is looking in relation to the methodologies of those different league table indicators. And that also guides, to some extent, our strategic priorities. But then so do the PIs.' [Provider]*

6.3 Encouraging greater use of PIs

There is a high level of awareness and use of PIs across institutions, and a growing awareness of the benefits of collecting and acting on performance data such as PIs (QAA, 2008), but this review suggests that awareness and use tends to be located in small pockets within institutions – at senior team level and/or with data specialists. Indeed, there was a perception that PIs are not as widely used as they could be, both within institutions and also in the wider sector. Many of the sector stakeholders interviewed felt they had a role to play as mediating organisations in encouraging take-up, and if the areas covered by the PIs were extended this could bring in new communities of users. Similarly the senior management in institutions felt they could do more to extend the interest in and responsibility for UK PIs and their own KPIs across all levels of their organisations. Greater use could be encouraged in three key ways as follows.

- **Improving understanding and thus confidence in the PIs.** PIs can be regarded as too complex, technical and rigid which can be off-putting to some potential audiences. This gives rise to the perception that only dedicated/full-time analysts or quantitative data experts can understand and make use of PIs. Awareness and use of PIs could, therefore, be encouraged by increasing the understanding of the methodology behind the PIs and thus their credibility, and by helping users to interpret the data in their own context (via increased user functionality including tools for interrogating the PIs).

- **Care in interpreting and contextualising.** Context is critical and stakeholders do feel that the PIs, the benchmarks and their associated data need to be used wisely, 'intelligently' and not taken out of context. PIs and benchmarks could be misleading if taken at face value without taking account of context, and can lead to unfair comparisons between institutions. Users need to understand that a wider number of external causal factors/forces can have an influence on the PI results which needs to be borne in mind when interpreting the measures or benchmarks. This is often a criticism levelled at the use of PIs and other measures in league tables, which arguably simplify and de-contextualise complex concepts and data. Mediators were felt to have an important role here to present PIs in an independent but informed and contextualised way.

- **More accessible presentation of the results.** Use and awareness could be encouraged with better visual and/or tailored presentation of the data, for example dashboards, as long as these are produced (analysed and interpreted) by those with an appropriate understanding and technical skill. A further method to increase use would be to provide tailored examples of how different audiences can make effective use of PIs.

Sector bodies and individual institutions appear to be working on these aspects to provide user-friendly accessible resources to their own customers. Mediating organisations were also felt to have an important role in presenting PIs in an independent but informed and contextualised way for a wider audience. Presentation of PIs both internally within institutions but also externally is therefore important, and stakeholders felt that increasing the use and awareness of indicators (the PIs and institutions' own KPIs) will drive up performance.

6.4 Wider measures of performance and profile

A vast amount of information is collected and made available to the sector and to providers specifically, and stakeholders acknowledged that the PIs are just one of a wide range of measures used to understand the profile and assess the performance of the HE sector and of institutions. Some of this data institutions collect for themselves but much are collected and returned to HESA for inclusion in the PIs, wider metrics (some of which feed into league tables) and other products (eg HEIDI). PIs have arguably limited coverage and so they are used within a wider basket of measures or metrics – qualitative and quantitative, public and private (ie internally produced via management information) – to build a more complete picture. Although some of these measures are somewhat crude, have incomplete coverage, and/or are based on subjective assessment, many of the sources overlap and so they allow for some degree of triangulation which increases the confidence of data users.

6.4.1 Range of wider measures

The variety of measures used to monitor performance was wide ranging and included the following groups.

- **Student focused measures** such as NSS, the International Student Barometer, the new KIS accessed via Unistats, student intake data from UCAS (including tariff points), and also student finance data from Student Loans Company, Student Finance Wales and Student Awards Agency for Scotland.
- **Research focused measures** such as data gathered from the research councils including RAE/REF outputs, which include data on research publications (including bibliometrics) and research funding, and other UK and international research rankings[13].

[13] For example there is a set of standard metrics developed by Project Snowball (www.snowballmetrics.com/) to help universities externally benchmark their performance across a broader range of research activities, to try to capture intensity and impact of research and to support the research management process.

- **Measures of the wider activities of HE** captured by HESA in their returns. These include: financial indicators, staff indicators, graduate outcomes, estates indicators and HE-BCI measures (all available via HEIDI).
- **Data from other education sectors** within the UK including the FE sector (their performance indicators, and apprenticeship rates), the school sector, and data relating to postgraduates[14]. Indeed, stakeholders expressed an interest in the potential for more data linkage across some of these other parts of the student life-cycle to be able to track individuals as they progress into and through higher education.
- **Data from professional bodies** such as The National College for Teaching and Leadership[15].
- **Data derived from institutions' management information and administration systems** covering data on applications, enrolments, retention, continuation, equalities, educational outcomes, scholarships and bursaries, and international student fee income. This would also include institutions' own KPIs and data gathered from ad-hoc surveys of their own students and graduates.
- **Qualitative measures** which could include Quality Assurance Agency (QAA) peer reviews, OFFA Access Agreements (in England) and the student voice captured via Course Boards.
- **League tables** including those reporting on UK institutions and international league table rankings.
- **Overseas comparison data** such as the European University Data Collection (EUMIDA)[16], the U-multirank initiative[17] and annual country level education statistics from the OECD (this includes data on HE entry, graduation and international study).

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[14] The latter includes a number of surveys – the Postgraduate Taught Experience Survey (PTES), the Postgraduate Research Experience Survey (PRES), Careers in Research Online Survey (CROS), and the Principal Investigator and Research Leaders Survey (PIRLS).

[15] Formerly the known as the Teaching Agency

[16] The EUMIDA is attempting to build a complete census of European universities, through a regular collection of microdata on individual HE institutions. The data considered for inclusion include a core set of data for each university covering the number and types of students and staff, and the fields of education offered; and an extended set of data covering personnel, finances, physical infrastructure and students as input indicators, and educational production, research production and wealth creation (third-mission) among output indicators (HESA 2011b).

[17] U-Multirank is a new multi-dimensional ranking for HEIs from across Europe and beyond. It will compare performance across five dimensions: research, teaching, knowledge transfer, international orientation and regional engagement. It is designed to be used flexibly by a wide range of interested parties by enabling users to specify the type of institutions they wish to compare and the areas of performance to include in comparisons (van Vught and Ziegele, 2011; Jongbloed and Kaiser, 2011). The first results are due to be published in 2014 but it has already received strong criticism (THES, 2013b and 2013c).

7 Conclusions and recommendations

> The key message from the review is that PIs are valued as a way to measure HE and the current approach to PIs is appropriate, so fundamental change is not required. However: a) the current set of PIs require some refinement; b) there is scope to introduce a small number of additional PIs to take account of the wider role of HE; and c) there is a desire to broaden the population covered by PIs to take account of the changing make-up of HE provision. There is appetite for change to ensure the measures remain useful, so work to refine the existing PIs should begin as soon as possible. The feasibility of making the other changes also needs to be explored, as developing new PIs and bringing other types of provision into scope may take several years to accomplish. Change at any level must be phased in to allow stakeholders to acclimatise.

The frank feedback and detailed insights from a wide range of stakeholders who participated in this review, drawn from across the key user groups of the PIs, have pointed to a number of conclusions, which lead to ten recommendations for the future direction of the PIs and for the next steps of the review process.

7.1 Conclusions and recommendations

- **PIs have a number of purposes and relevance across the UK**. There is a genuine appetite for PIs and the benchmarks as they provide measures of actual and expected performance at an overall sector level and at individual and institutional level. They have value in: a) demonstrating the success of the UK HE sector and of individual institutions; b) ensuring accountability and public confidence; c) supporting the development and evidencing the impact of public policy; d) understanding the relative performance of an institution against others or tracking an institution's progress over time; and e) supporting institutions' performance management and improvement processes (Chapter 3). The PIs have UK-wide coverage and focus on priority areas that have resonance for the institutions and governments in all four nations (sections 2.2 and 4.1).

Recommendation 1: PIs and benchmarks have value and should therefore be retained.

Recommendation 2: PIs should continue to have UK-wide coverage. The potential for creating additional nation specific measures and benchmarks via the improved accessibility and functionality in HEIDI or other means should be explored, with the individual funding councils and governments responsible for making these public.

- **PIs have multiple audiences with different needs**. PIs are perceived to have been developed for government and its agencies (acting on behalf of the public) to fit with long-term sector level strategies and policy priorities, yet the primary user group are the individual providers of HE. This creates a duality in need: on the one hand there is a UK-wide need for published quality assurance performance measures of the sector as a whole and of individual institutions; and on the other hand there is an institutional level need for standardised performance measures to use in internal performance management and peer referencing (to meet operational needs) (section 3.1). These needs overlap to a degree but are not wholly aligned, which causes tensions.

    - Government relies on institutions to provide data in a timely and accurate fashion in order to produce the PIs. Although institutions have a duty[18] to provide information to HESA – the agency established by government to collect and disseminate statistical information – the provision of this information is encouraged and sustained by its use and usefulness to institutions rather than by overt enforcement. The measures therefore must have relevance to the sector and its institutions, and if the cost/burden of producing data in calculating the PIs outweighs the perceived private benefits, institutions may become reluctant to continue to support this system so readily (section 3.3).

    - There is a desire among institutions to drill down into the PIs and go beyond the published data. Many institutions undertake more detailed, fine grained and nuanced analysis and comparison against peer and competitor groups for units within their organisation or for a wider range of measures than are currently covered by the PIs. This activity arguably moves beyond the purposes of PIs, shifting the balance towards the specific needs of individual institutions rather than the general needs of government and the sector overall (section 4.2).

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[18] The Further and Higher Education Act 1992 and the Further and Higher Education Act (Scotland) 1992 (FHE Act 1992) require HEIs to give a funding council such information as they may require for the purposes of the exercise of any of their functions under the Education Acts. HESA was set up by agreement between the relevant government departments, the higher education funding councils and the universities and colleges in 1993. It is the central point of collection and dissemination of statistical information to meet the requirements of the Education Acts and minimise the burden of compliance on HEIs. Each HEI enters into a 'financial memorandum' with the relevant funding council. These financial memoranda place a number of mandatory requirements on HEIs that are conditions of funding. One of these requirements is that each HEI pays a subscription, and supplies timely and accurate data, to HESA. See HESA Data Protection Guidance (Version 5.0, April 2012): http://www.hesa.ac.uk/content/view/140/170/

Recommendation 3: PIs should continue to focus on UK-wide sector level priorities and provide both sector level and institutional level measures and benchmarks in these areas. PIs should be concerned with strategic indicators and this will ensure they reflect the heart of what HE is about. Given the increasing diversity of provision, not all PIs will necessarily be relevant to all institutions but will reflect the core missions of at least a significant proportion of institutions.

Recommendation 4: Specific individual institution level operational indicators that move beyond general priorities should be developed using the improved functionality and accessibility of HEIDI, rather than developed as separate PIs.

- **PIs are a specialist tool.** They are not appropriate for all audiences without mediation or interpretation. Students, prospective students and their sponsors are recognised as important stakeholders in the sector, but they are not considered to be a direct audience of PIs either now or in the future as they will struggle with the underlying concepts, rules and definitions, and the complex methodology. This can lead to a lack of understanding, misinterpretation and misuse of the data. In addition this group already have a well developed set of measures and statistics to support their choices (sections 4.2 and 6.1).

Recommendation 5: Students (prospective and current) should not be considered a direct audience of PIs, and instead the information contained in PIs should be disseminated to students indirectly through mediating bodies. Greater and better use of PIs within existing audiences should be encouraged rather than developing new/different audiences.

- **The approach to the PIs is well regarded, and has a number of key strengths.** Perhaps the most important aspect is that PIs provide measures (rather than targets) that are not directly linked to funding behaviour or institutional rankings. There should be an expectation that institutions will take note of their performance, strengthen areas of weakness and strive to improve, and as such PIs are a tool for improvement, not an externally imposed tool for control. Other strengths include: having a credible and transparent methodology and producing measures that are evidence-based and statistically robust; they are produced by a legitimate and independent body; they have a UK-wide coverage; and they are published and so free and available to all. The PIs themselves are seen to have a number of distinctive features, setting them apart from other measures: they measure what is important to the widest audience(s), they have a stable and credible methodology, they present processed and contextualised information, they provide an authoritative reference point for UK HE, they add value by providing individualised benchmarks, and they provide information that is not readily available elsewhere yet do not attempt to quantify and standardise all aspects of HE (section 3.4).

Recommendation 6: The key features of the current PI approach should be retained. A set of core principles should be developed (building on those from the 2006 review) to judge the appropriateness of making changes to the existing PIs and introducing any new PIs suggested for the future. Suggested principles are outlined in section 7.2 below.

- **The current set of PIs is no longer entirely fit for purpose.** Despite the acknowledged strengths and features of the PI approach, the current PIs are no longer entirely fit for purpose. The context for HE has changed considerably since the first set of PIs was introduced in 1999 (Chapter 2) and the current PIs do not reflect the full make-up of HE provision. Adaptations to the approach may therefore be required, particularly to the scope and coverage. Indeed, there is strong support for PIs to reflect the make-up of HE provision more effectively in terms of:

  - **institutional diversity** – to encompass the HE provision of FE providers and alternative or private providers

  - **student diversity** – to move beyond the focus on full-time undergraduate students to encompass the experiences of students at postgraduate level, as well as 'less typical' groups of undergraduate students such as part-time students, EU and international students and students studying in HEI campuses overseas

  - **study diversity –** to accommodate and capture new learning modes and levels of learning, such as online learning, distance delivery and the diversity in the range of courses available to students (sections 2.2 and 4.2).

  The current set of PIs cover relevant topics and should continue to be the focus for performance measures: widening access, retention, employability and research. However the actual measures used have not kept pace with the policy focus within these fields across the four nations and internationally, and the improved availability of data (sections 2.4 and 4.3). The current PIs may therefore need some revision to be fit for purpose in this new context.

Recommendation 7: The feasibility of extending the coverage of the population included in the PI measures should be tested, in terms of: a) institutions, b) students, and c) study mode. The ability to broaden coverage will be dependent upon data availability and reliability, the ability to maintain confidentiality, and whether the measures can be presented in useful ways given the degree of heterogeneity within this wider population. Further work should be undertaken to explore how best to present aggregate results that reflect the increased diversity in benchmarks.

Recommendation 8: The areas covered by the PIs should be retained and the current set of PIs should undergo a more detailed review to ensure they use the most appropriate data and have the appropriate focus to measure the specified topics. Various suggestions for amending the existing PIs have been made in this review, and the feasibility of these suggestions should be explored further.

- **The current PIs have a narrow coverage.** The topic areas covered by the current set of PIs are somewhat limited and fail to reflect either the full range of HE sector activity or the full student life-cycle (sections 2.1 and 2.3). There is no appetite for reducing the PIs; instead there is support for growing the number of PIs to broaden their coverage. Stakeholders would appear to support the creation and introduction of a limited number of additional PIs to assist evidence-based decision making and planning at a sector and institutional level. A range of potential new areas for PIs have been suggested many of which align with more recent government and sector policy interests and institutional activities (Chapter 5). These are outlined in section 7.3.2 below. These concepts are challenging to define and thus measure, but the sector should not just be attracted to that which is easy to measure.

Recommendation 9: The feasibility of broadening the coverage of PIs into five new areas (mostly beyond teaching and learning) should be explored: i) value-added, ii) financial sustainability, iii) teaching quality, iv) international outlook and v) employer and business engagement. This will involve exploring the degree of difficulty involved or, in essence: the potential for creating standardised definitions of the relevant concepts; the potential for creating individual metrics; the availability and reliability of existing data or the potential for capturing new data; and how best to contextualise any new PIs in these areas to make them useful and understandable. In addition it will be important to weigh up the balance between the usefulness of any new measures to the two key audiences (government and its agencies, and the sector and its institutions) and the degree of difficulty in establishing these measures.

- **There is an appetite for change but this must be handled carefully**. There are a number of issues that need to be considered before making changes to the existing PIs or introducing new PIs.

  a. The resources required by institutions to gather, process and return data are significant and there is a strong desire among stakeholders not to collect any further information and/or make additional data returns (section 3.4.2). If additional PIs are developed, greater use could be made of existing data. This includes other data already collected by HESA, as well as data sources such as the National Pupil Database (NPD) in England or the Pupil Level Annual Schools Census (PLASC) in Wales, UCAS application and admissions data and the Student Loans Company (SLC) data, which provide increased opportunities for data linkages to track the progression of students (section 2.4).

  b. There is a tension for institutions between having public and transparent information to enable positioning/benchmarking and to help with institutions' performance management and providing information that could be perceived as commercially sensitive in an increasingly competitive market or information that could be used in ranking activity. Providers may be reluctant to support the introduction of PIs in new areas, which might serve to weaken their positions in league tables, undermine competition, or threaten the comparative advantages of particular groups of institutions (sections 2.1 and 5.2.1). This may give rise to the development of some new PIs at a UK sector level, rather than at an individual institutional level (which differs from the current approach to the PIs). Such sector level measures could be aligned with international performance measures to enable international comparison of UK HE with provision in other countries.

  c. Stakeholders have concerns that some information (eg on employment outcomes) will be out of date by the time it becomes available, and providers especially are worried about being judged against out-of-date information (section 4.2).

  d. There is a tension between the need for stability in PIs in order to assess trends and direction of travel (a key strength of the PIs) and the need to keep up with the dynamism in the sector (section 2.5). Changes to the PIs will create a break in the time series and impede stakeholders' ability to examine and monitor trends. Institutions may link their strategic planning process to the PIs and so changes will also affect the planning process.

Recommendation 10: The introduction of any additional PIs or amendments to existing PIs must involve further consultation with the sector to ensure that the burden of data collection on institutions is not excessively increased, that institutions' competitiveness is not unduly affected, that where possible PIs are underpinned by timely data, and that the potential consequences of breaking the time series are fully understood. Introducing sector-level only indicators should be considered if institution level indicators are not appropriate for some areas. In addition if changes are agreed to the existing PIs, a phased introduction should be considered (running the old and new versions alongside each other). It may be possible to improve existing PIs and establish new PIs fairly easily by making use of existing data, and so this should take priority over new data collection activities, so that institutions are not overburdened.

7.2 Establishing a set of principles for PIs

One of the recommendations outlined above is that a set of core principles should be established to underpin the development of PIs in the future. These should be used as a first step in the change/review process to assess whether change should be undertaken. These principles are not concerned with the feasibility of producing indicators, which requires an in-depth technical exploration focused on whether a measure can be produced (see section 7.3 below).

The principles suggested build on the principles and criteria that were developed in the earlier review (HEFCE, 2007[19]), with some additional principles adding new dimensions to take account of the concerns of stakeholders in the changed context of HE (Chapter 2). Fourteen principles are suggested and these are grouped into six areas.

A: Coverage and scope

- A1: PIs should measure what matters, underpinning long-term policy goals for the sector rather than short-term political priorities, and the core mission of a significant proportion of institutions rather than the specific operational issues of individual institutions. In some areas, sector only measures might be more appropriate.
- A2: PIs should have a UK-wide coverage providing as standard an aggregate picture of UK HE. While the four nations of the UK are developing different policies to respond to the needs of their public and priorities, institutions should still be able to compare themselves to other institutions in the different nations.

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[19] See paragraphs 16-18: http://webarchive.nationalarchives.gov.uk/20100202100434/http://hefce.ac.uk/pubs/hefce/2007/07_14/07_14.doc

B: Quality of data

- B1: PIs should be produced by a credible and independent organisation.
- B2: PIs should be evidence-based and statistically robust. 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 (based on criteria a, HEFCE, 2007).
- B3: PIs should have longevity/continuity, enabling a time series to be developed and the ability for users to conduct longitudinal analysis.
- B4: PIs should be produced in a regular and timely fashion. Where measures are out of date, they are less useful in terms of assessing current institutional performance. To promote the timeliness of data, PIs should, where possible, be produced annually. However it is acknowledged that it may not be sensible for all new PIs to be produced annually, especially where to do so would be costly or put too much of a burden on institutions.

C: Dissemination

- C1: PIs and benchmark values should be free and available to all. They should provide information in the public domain that is not available via other means. There must be a value to the public in publishing the PI and benchmark values at institution level. In some areas, sector only measures might be more appropriate.
- C2: Data and the methodology used in the production of the PIs should be made available to institutions, bodies acting on behalf of institutions, and government bodies and agencies. No institutional level results should be published before giving the higher education institutions (HEIs) concerned an opportunity to correct errors of fact (principle c). The methodology should also be available to all other interested parties on request (amendment to principle d, HEFCE, 2007).

D: Benchmarking and enhancement

- D1: PIs should be directional and attributional. There must be general agreement on whether high values of the indicator represent a positive or a negative outcome (formerly criteria e, HEFCE, 2007), and that movement in values can be attributed to change in sector or institutional activity rather than reflecting wider extraneous factors. This enables users to understand the direction of travel of the sector and of individual institutions, and so PIs can be used to underpin policy development and evaluation, and institutional performance enhancement. There should be an expectation that institutions will take note of their performance, strengthen areas of weakness and strive to improve.
- D2: PIs and their associated benchmarks should not be directly linked to funding as externally imposed targets or lead to institutional ranking. They should provide information for government stakeholders that is suitable for informing sector level policy and information for institutions that is suitable for internal use (this may involve target setting) (based on criteria b and c, HEFCE, 2007)
- D3: PIs and their associated benchmarks should allow institutions to compare themselves with a high degree of reliability. The benchmarks provided should take account of context, comparing institutions in a fair way to each other (using objective

groupings of institutions and comparing like with like) (based on criteria b, HEFCE, 2007).

E: Burden of data collection

- E1: PIs should not place undue burden on the sector. Where possible, existing data sources should be used to develop new indicators/improve existing indicators, including data submitted to HESA by providers and relevant administrative datasets. Any proposal to collect further data should be carefully costed and justified in terms of anticipated use and usefulness (based on principle a, HEFCE, 2007).

F: Influence on behaviour

- F1: Publishing PI and benchmark values at institutional level must not create perverse incentives or lead to perverse behaviour (based on criteria f, HEFCE, 2007). In some areas, sector only measures might be more appropriate.
- F2: The design and use of PIs must not undermine competition in the HE sector. In some areas, sector only measures might be more appropriate.

7.3 Making changes

Stakeholder feedback suggests that in order to ensure support and buy-in from the two key user groups (government and its agencies, and providers and their representatives), five steps need to be considered before making any changes to the existing PIs, extending the population covered and/or developing new indicators.

1. **Test against principles**: an amended or new PI should be assessed against the set of principles to explore whether it *should* be produced – at both sector and individual institution level or at sector level only. This will ensure that the PI will be useful to its key audience.
2. **Undertake (technical) feasibility research**: there should be a focused feasibility stage to explore whether a new or changed indicator *could* be produced. This should explore issues in capturing relevant data, the reliability of data used (in terms of accuracy, timeliness, and completeness), producing standardised definitions, and boiling the concepts down into individual metrics. The feasibility work should also explore the potential for and utility of sector-level only indicators for some measures.
3. **Development and testing**: an investigation of data collation (or collection if new data are required), technical data manipulation to derive the indicator, and adjustments to derive the benchmark. This should explore how best to contextualise the data and resulting values to make them useful and understandable (ensuring that measures reflect actual performance and not just the characteristics of individual institutions or broader external factors).

Steps 1 to 3 will involve consultation with the sector via the institutional representation on the Performance Indicators Technical Group.

4. **Dialogue with sector**: the new or amended indicator should be presented to the sector or its representatives as appropriate to the materiality of the change. This should set out a justification for the change/introduction and its benefits, and set out the additional data collection requirements (if any) so the full implications of the change can be understood and any concerns about its introduction or use can be raised. The

challenge of comparability is a particular concern for institutions, so the concerns of providers and sector stakeholders need to be explored and accounted for.

5. **Phased implementation**: the final stage should involve establishing a timetable for the introduction of the new or amended indicator, giving stakeholders time to take account of this in their planning processes; and the consideration of running any changed indicator alongside the previous version for a couple of cycles.

7.4 Areas worth pursuing

This was a fundamental review of PIs as an approach to measuring HE, so the research did not capture detailed feedback on each of the existing PIs nor detail about the technical aspects of the methodology for developing individual measures or benchmarks. However generic suggestions were collected for ways to refine and thus improve the existing PIs to ensure they continue to be fit for purpose. Suggestions were also captured for potential new areas to measure with PIs to cover the wider range of HEI activity and purpose. Some areas are already covered in existing HE data collection and feature in institutions' own KPIs but involve a wide number of metrics. Some are relatively new concepts with less defined measures and limited existing underlying data.

Each of these suggestions has inherent difficulties and challenges but are worthy of further exploration (bearing in mind the proposed principles outlined above). Challenges include: lack of a consensus as to the focus of the measure, lack of a consistent definition of the concept, concerns over reliability of existing data (including incomplete coverage of the population to be measured, potential inaccuracies and time-lag in data availability), and lack of existing data.

7.4.1 Suggestions for improving existing PIs

- **Employment of leavers PI** (E1): establish a longer-term measure of employment, moving beyond the current measure of six months and/or take account of job quality rather than just employment status. There may be potential here to use the longitudinal destinations survey data (currently a sample survey rather than a census of all graduates) but stakeholders acknowledged there would be challenges and cost implications in doing so. The review of PIs in 2006-07 also identified the issue of job quality but this was not developed into a new/revised PI (HEFCE, 2007).
- **Research output PI** (R1): focus on innovation, knowledge exploitation and/or quality of research outputs (as the REF adequately captures research outputs).
- **Non-continuation PI** (T3-5): broaden focus to look at success or outcomes (rather than still in HE and/or achieved a degree), and consider relevance of the measures to non-traditional programmes.
- **Widening Participation** (in recruitment) **PI** (T1, T2 and T7): look for more appropriate proxies for socio-economic status such as measures of parental education or household income (eg those eligible for state grant-based support, or those who received Free School Meals); better school-based indicators (perhaps around school ratings); and common measures of low participation/deprivation across the four nations. Also expand the PI to incorporate other key equality groups in order to monitor progress with equality challenges in HE, and expand the PI to encompass other stages of the student journey such as non-continuation, attainment and employment outcomes in order to move beyond a focus on access to a true focus on participation.

7.4.2 Broadening the scope to measure new areas

- **Value-added**: explore the potential for a PI around: a) 'distance-travelled' to take account of the baseline characteristics of the cohort and their outcomes (this could be linked to student experience/teaching quality); b) students' return on investment, the value to students of having a degree in terms of increased earnings/improved job prospects over the life course (often referred to as the graduate premium); and c) economic impact and the role institutions have in stimulating economic growth (for example, through engagement with industry and communities). *Some student input and outcome data already exist (although these are not without contention), as do data on university-business interactions, however new data would undoubtedly be required (principle E1). Feedback also indicates that value-added measures have the potential to lead to perverse behaviour and undermine competition in the sector (principles F1 and F2), there are also challenges around data coverage (principle B2) and additionally economic impact may be difficult to attribute (principle D1). These value-added areas may therefore be more appropriate as the focus of sector-only level PIs.*

- **Financial sustainability**: explore the desirability for and potential to develop sector and institutional level PIs and benchmarks around institutional financial sustainability and/or broader measures of institutional health and administrative efficiency (eg would this provide useful information or undermine competition within the sector?). *Data already exist in this area – captured via TRAC (Transparent Approach to Costing) and institutional management information systems, including: income levels, costs, cash flow/level of liquid assets, turnover, and bottom-line surplus. Feedback indicates that measures of financial sustainability may be difficult to make comparable across the four nations due to the different funding mechanisms which would lead to challenges in institutional comparison (principle D3), there is the potential for indicators in this area to lead to external sanctions (principle D2) and undermine competition (principle F2), and it may be difficult to determine whether high values (eg surplus) are a positive or negative outcome (principle D1). These challenges could be overcome with careful consideration of the measures chosen.*

- **Teaching quality:** explore the potential for a PI around the quality of teaching/academic quality and aspects of the wider student experience, given the centrality of teaching to the mission of the majority of providers. *Data already exist in this area including: class size, staff/student ratios, contact hours, interaction with academic staff, per capita spend on learning resources, and student feedback (via the NSS); but there is little in the way of student engagement with education and the wider student experience although this is the new frontier for student surveys (principle E1). However it may be challenging to produce evidence-based statistically robust measures in this area (principle B2) given its largely subjective nature, and measures here are likely to feed indirectly into institutional rankings. Again these challenges could be overcome with careful consideration of the measures chosen.*

- **International outlook:** explore the potential for a PI to measure international outlook and links such as international student recruitment, extent of transnational education and the experience and outcomes of international students. *This would require additional data collection (principle E1) but with careful selection of appropriate measures it would not place an undue burden on the sector. International focus reflects the long-term policy goal for UK HE but may not reflect the core mission of all institutions, this area may therefore be more appropriate as the focus of sector-only level PIs.*

- **Employer and business engagement**: explore the potential for a PI to capture links with employers and working with businesses. *Data already exist in this area through the HE-BCI survey and so a measure in this area could be developed quickly.*