



Through a glass, darkly: Measuring the social value of universities

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November 2011

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Preface: Measuring the social value and wider benefits of higher education – why now?

Debates continue to simmer about the social responsibility of universities: how far should the focus of their work be directed by politicians and the wider public? What is the appropriate balance between their contribution to economic growth and to the wider 'public good'? And for the latter, is it possible to find a language to describe what their contribution actually is? Can the impact and value of public engagement be meaningfully 'quantified'?

This is a crucial debate to engage in, which is why we chose to commission this report, to begin to address the challenges of measuring the social value of Higher Education. The debate about the role of universities in society is often characterised by misunderstanding, over simplifications and/or an absence of evidence. It has often been limited to arguments about the market or 'close to market' activities of higher education institutions; with a particular emphasis on research and teaching that has a direct relevance to business and industry and is relatively easy to measure. This skews the argument, undermining the huge value of the social benefits the sector brings. Whilst government – the Treasury in particular – expect that if something is valuable enough to receive public funding, the outcomes should be described and measured, the HE sector (like many others) has struggled to articulate the social benefits it generates.

In addition, many in the university sector resent external attempts to influence the focus of teaching and research to meet political ends. This can be seen in the discourse stimulated by the 'impact' agenda, characterised by some as a crude attempt to force industrial liaison and short term financial imperatives on to the sector, rather than an opportunity to articulate the wider benefits it generates. The wider public themselves often seem under-whelmed or ill informed about what universities contribute, highlighted by UUK in their research for Universities Week in 2010 which revealed that less than one-in-five people recognise the wider impacts universities have on society.¹

All of the above pose significant threats to the sector, and led us to the conclusion that urgent work was needed to try to shed light on this difficult and contested area. We identified three key risks that we hoped that this report could help us address:

- In a time where university funding is being reduced, or re-configured, there is serious risk that the activities generating these wider social benefits are cut back because there is inadequate evidence to make the case for their continuation;
- Longer term, such a re-focusing of effort could damage public support for investment in the sector (whether this comes from philanthropic giving, students, graduates as alumni, businesses or the government);
- Without better insight into the value generated by universities' societal engagement, we miss an important opportunity to achieve more with the limited resources at our disposal, and will struggle to engage in purposeful debate with wider society about the future direction of the sector.

We hope this report will trigger just such a purposeful debate – inside and outside the HE system. The authors, Ursula Kelly and Iain McNicoll, are acknowledged experts in the field. They have conducted a thorough review of existing practice and policy in the HE sector, and also looked outside it to draw inspiration and insight from how other sectors have navigated these tricky waters. They end the report by outlining an approach which they believe could trigger a significant step forward in how universities describe and report on the full breadth of impacts and benefits that they generate.

We hope you find the report useful, and would be delighted to receive your comments and feedback upon it.

Paul Manners
Director, NCCPE
November 2011

Introduction and rationale – background to the report

"Better metrics do not of themselves deliver better outcomes. You can't fatten a pig by weighing it. But if you don't have some means of weighing it you may find yourself unable to persuade others that it's as fat as you believe..." **Mulgan, G., (2011)**

This report has been prepared during the summer of 2011 for the National Coordinating Centre for Public Engagement (NCCPE). It was developed following discussion between the authors and the NCCPE regarding the current patchwork of evidence for higher education impact and the need for a holistic approach to capturing the broader value of what universities² do and their wider impact on society, their 'social' as well as economic value. The authors have extensive experience in researching aspects of higher education's economic impact. They have also undertaken previous experimental work on ways to estimate the overall economic value of higher education institutional outputs, including the 'non-market'³ activities of higher education institutions.

In the first instance the authors worked with the NCCPE to prepare a discussion paper for circulation to the participants of a 'Round Table' meeting which took place in June 2011 during 'Universities Week.' The round table breakfast discussion focussed on the role of universities in society and how a case may be made for the social and public value of the higher education sector. The discussion paper is included as Appendix 2. The paper highlighted some of the issues involved in making a case for universities' social and public value, as well as presenting reasons why undertaking a valuation of the sector would be beneficial. The paper was presented to the meeting alongside a new report published by Universities UK,⁴ which had applied the New Economics Foundation (nef) Social Return on Investment methodology to make estimates of some aspects of the value generated by three case study universities.

This report further expands on the key elements highlighted in the discussion paper. In Part 1, it discusses why measuring the value of universities is necessary or desirable. The report summarises the current state of knowledge in impact assessment and valuation of universities' contribution to society. It takes a 'helicopter view' of the current position regarding impact of UK universities and their work (this includes, for example, that being adopted by the Research Councils, the Research Excellence Framework (REF) and the 'pathways to impact' process).

In Part 2 an overview is taken of current approaches in other sectors to measuring social value generation. This highlights some of the key approaches to assessing value generation being adopted in other sectors, in particular by the 'third sector' and other non-profit-making organisations, as well as by parts of the public sector (such as that undertaken by the BBC with the 'public value' test).

With Parts 1 and 2 having reviewed existing approaches, inside and outside of the higher education sector the report moves in Part 3 to the exploration of a new holistic approach to assessment of the economic and social value of UK universities. We explore how a 'socially modified economic evaluation' (SMEV) could be used at both sectoral and institutional level, and indicate the steps that would be required for its implementation. We believe this could significantly enhance the capacity for robust measurement of the social value of the sector.

Part 1

1. Measuring value in higher education - contested territory

1.1 From the outset it should be acknowledged that seeking to place a value on the work universities undertake is a difficult and frequently controversial task. There are conceptual, definitional, linguistic, philosophical, cultural and political issues involved as well as methodological and data challenges.

1.2 Not everyone within the higher education sector itself is convinced that valuation of higher education activity is a worthwhile task – some consider it to be ‘giving in to the bean counters’; others believe that measuring value generation will tend to be focussed only on the aspects of higher education that are more easily ‘counted’ - for example: ‘research papers produced’, ‘contracts awarded’, ‘numbers of students taught’ and that this will result in a superficial, ‘*Gradgrindian*⁵ picture of what universities do and how they contribute to society.

1.3 Others are also very uncomfortable at the idea that the value of what universities do could be expressed in monetary terms. In particular they are concerned that this will lead to a focus solely on work that generates revenue or is directly ‘economically relevant’ - and will overlook ‘non-economic’ benefits.

1.4 The heated debate in recent years regarding the Research Councils’ and Funding Bodies’ ‘Impact Agenda’ - which many in the higher education sector would still resist if they could - gives a flavour of the controversy surrounding attempts to examine the benefits being delivered by higher education and, in particular, the suggestion that funding should be tied to evidence of benefit generation.

1.5 However, despite sectoral unease about ‘valuation’ being potentially linked to funding allocation, it simply cannot be ignored that issues of funding and resource allocation are at the very heart of the drive to seek ways to evaluate the contribution of universities to society. The UK higher education sector has grown substantially over the last 15 – 20 years, with growth largely supported by public investment. Since the time of the Dearing Inquiry into Higher Education there has been a 39% increase in student numbers, from 1.79 million students in 1997 to 2.49 million students in 2010.⁶

1.6 Increased public financial support has inevitably led to increased demand for accountability and for evidence that society is receiving a return on its investment in universities. At a time of economic constraint, hard decisions have to be made about the allocation of public resources. In 2010/2011 this has led to central UK government policy decisions to make quite significant shifts in the balance between public (by the government) and private (by the individual) investment in higher education with individual students being asked to pay significantly more for their higher education through increased fees. This policy shift is not uniform across the regions of the UK, with devolved government decisions differing from central government. However it has underlined the point that if universities (and their students) are asking for public finance to pursue their aims, there needs to be a clear justification for money to be spent on higher education that could be spent instead, for instance, on hospitals or schools. There needs to be evidence that social and public value is being generated by public investment; the social benefits need to be greater than the social costs. So while accountability and justification for funding may not be the *only* rationale for seeking a better understanding of higher education’s contribution to society, it is certainly the main driver.

1.7 Accountability for funding is not an issue confined to higher education alone. Other sectors, most notably the ‘third sector’⁷ and parts of the public sector, have also been facing the challenge of showing how their work ‘makes a difference’ and can generate value, thereby justifying their funding – from government, or from private donors and sponsors. There has been a debate carrying on in the ‘cultural sector’ for several years regarding how best to show the importance of supporting cultural activities (and a growing academic literature has developed on the value of culture).⁸ Indeed the higher education sector has at times seemed to be lagging behind other sectors in recognising that justification for funding is necessary and that the value of higher education needs to be demonstrated, not simply assumed.

1.8 All of the evidence that we reviewed from other sectors’ efforts to articulate, explain and provide measures of social or public value revealed that these efforts were driven by discussions of resources and funding. In the course of articulating their purposes and objectives the various organisations were seeking to demonstrate their ‘higher purpose’ and their aims for a broader good - but they were

compelled to do so primarily because they were asking a third party – a sponsor, a donor or the public purse – to pay for their activities. This includes, for example, the BBC, who (in the early 2000s) took on board and embedded a ‘public value generation’ framework into their management and governance processes and introduced the ‘public value test’ as part of their case for charter renewal and as part of the licence fee negotiations. For more details see Appendix 3 and *Building Public Value - Renewing the BBC for a Digital World* (2004).

2. The current higher education policy context

2.1 UK Universities are complex multi-faceted organisations, which engage with almost all sectors of society, including the general public as well as the public sector, business and third sectors.⁹ The current UK university system is also very diverse, with 164 institutions recorded by HESA in 2010. Some have their origins in medieval times, many others trace their roots to the 18th, 19th and 20th centuries and some have only very recently been awarded university or degree-awarding status in the 21st century. Sectoral turnover in 2010 was £26.8 billion. Their primary activities are focused on teaching and research at higher level, but universities and their staff (and students) also engage in a very wide range of additional activities which they feel are congruent with their mission – including working with local communities or supporting educational and charitable initiatives in other countries. Institutional missions frequently vary according to a university’s geographical location, its history and reasons for foundation, its current portfolio of activity and its own sense of identity; they can also be strongly steered by the personal philosophy of particularly influential leaders within the university.

2.2 In seeking to explore the role that universities play in society, it is important to understand that UK universities are not part of the public sector and are not owned by government. Neither are they commercial enterprises owned by shareholders.¹⁰ They are legally autonomous ‘not-for-profit’ organisations.¹¹ Most are registered charities.¹² This is important because it influences institutional motivation and behaviour. Universities do not have to generate profits for shareholders, and they have considerably more freedom than public sector organisations to set their own diverse missions and objectives, and to judge themselves by their own ‘yardstick’ of success. Most, if not all, of our universities will include mission objectives that promote the ‘greater good’ of society but different universities will focus on different ways of doing this.

2.3 However, while universities are not part of the public sector, they continue to receive significant public funds in order to undertake teaching and research – and indeed in the last century, universities effectively ceded control over many parts of their operations, allowing stronger government influence in return for public funding.¹³ No UK university is wholly public funded, with many attracting substantial amounts of international and private income. However public funding remains extremely important for their current operations, and for many years the domestic student market has been heavily subsidised, and the numbers of students controlled, by government.

2.4 Following the 2010 Browne Review¹⁴ and the 2011 White Paper on Higher Education in England¹⁵ (as well as the Scottish Green Paper and the related Northern Ireland strategy for higher education and the Welsh Review of the economic contribution of higher education), UK Higher Education policy is entering new and uncharted waters. Student funding policy looks set to become radically different across different parts of the UK. In England there is now a clear policy drive to shift the balance of the costs of participation in higher education away from the state and onto the individual participant. There is a greater emphasis on the private benefits derived by individual participants in higher education, requiring a greater private contribution towards the costs.

"There is of course far more to higher education than financial benefit. It can transform people’s lives for the better as their intellectual horizons are broadened. Nevertheless, graduates do, on average, earn more than non graduates and their higher education is one reason for this. So it is fairer to finance the system by expecting graduates to pay, if and when they are in better paid jobs...." BIS (June 2011)

2.5 In other parts of the UK the policy conclusions are less clear cut with extensive ongoing, sometimes fraught, public discussion about the putative existence of more general benefits to society from higher education that go beyond financial return. The idea that there are more general benefits is seen as a justification for the public purse to continue to shoulder most of the cost burden:

"Higher education makes a contribution to our society, our economy, our health and our culture. It is part of our national life. We need to maintain and enhance its excellence and competitive edge in the face of the challenges currently facing the sector... Only one idea is off the table and that's tuition fees. ..." From introduction to, Building A Smarter Future (web version), **Scottish Government (2011)**

2.6 The changes in student funding policy – and the variations in this across the UK – are bringing the issue of university value into sharper focus. Who are the primary beneficiaries from higher education? Does higher education have a wider value to society beyond the private benefits to the individual? Are the benefits to the individual (who, after all, is also a member of society) purely financial and only related to higher potential income? How can we measure or assess the wider value of higher education?

2.7 In relation to research, there is also now an increased emphasis on demonstrating the *impact* of research, which is also to be linked to funding. The Research Councils require researchers to map out 'Pathways to Impact' as a condition of grant and the new Research Excellence Framework, which will form the basis of decisions on future research funding allocations direct to institutions, also includes a significant element (20% of the overall assessment) related to the 'impact' or 'reach and significance' of the research being assessed.¹⁶

2.8 Across the UK each funding body also allocates a proportion of funding to support 'knowledge exchange activities', on the basis that these are likely to promote broader university impact; in England the Higher Education Innovation Fund (HEIF) is the primary channel for this, with counterpart funding streams in Scotland (Horizon Funding), Wales (the Innovation and Engagement fund) and a Northern Ireland version of HEIF, with broadly similar purposes albeit slightly differing methods of allocation reflecting different regional priorities. All of the Funding Councils have tried to reflect support for wider activities beyond those considered immediately 'economically relevant' (with both the SFC and HEFCE commissioning studies seeking to elicit ways of demonstrating wider public benefit).¹⁷

2.9 However the discussion in recent years about higher education's contribution to society has been most often characterised in terms of the economic benefits generated by higher education – and there is a growing body of research into different aspects of the economic role of universities. This has included, for example, the impact of university expenditure generating jobs and output across the economy; universities' role as major export earners; the role of universities in contributing to regional innovation and competitiveness and the impact of graduates on productivity.¹⁸ The idea that universities have an important role to play in the economy is now broadly accepted; however at the current time of economic constraint, when hard decisions are being made about the allocation of public resources, there is an increasing urgency to find ways to more fully consider universities' broader contribution to society and the extent to which universities may be delivering wider value beyond the directly financial.

3. Issues of value: definitions and meaning

3.1 There are many different concepts of value and these can have very different meanings to different people. In this section we examine some of the areas where discussion of social and economic 'value' can become difficult and fraught due to conceptual and definitional challenges.

3.2 It is worth mentioning just a few of the many expressions of 'value' with which the path is regularly strewn. These include:

Educational value; Cultural value; Intrinsic Value; Option Value; Heritage Value; Economic value; Public Value; Social Value; Financial Value; Blended Value; Instrumental Value (and so on and so forth.)

3.3 Among the many questions encountered include discussion of whether 'value' can be assessed objectively at all - is it inherently subjective? Can something have an 'intrinsic value' that is beyond quantification (an issue that has been hotly debated in the cultural sector)? How far is the social 'value' of an object or a service connected to the 'values' of the society in which it is located?

3.4 Very real problems also arise due to the lack of a common terminology across different disciplines and from terms being used in a broad sense when more precise definition is needed. For instance, a core problem is that a number of words, phrases, concepts and terms used in everyday language or 'common parlance' can have subtly – but importantly – different meanings for economists or when used in economic analysis. This can lead to discussion about 'value' that is entirely at cross-purposes and where it can be near impossible to develop a clear shared understanding of the issues at stake.

3.5 A particularly important example (which will be elaborated in more detail in Part 3) is the real definitional difference between financial value and economic value. It is unfortunate that in many current discussions about higher education, measures of financial value are, often erroneously, called 'economic value' and/or are assumed to be indicative of the total value to society.

3.6 However, financial value is different from economic value. Financial value is about actual money flows, for contracts entered into, fees paid, books bought, cash handed over. It is of course a useful measure – universities, after all, need to be financially affordable and viable and society needs to have the actual cash to pay for them. However economic value is a much broader concept, it is all about the resources used and generated, which is a much more comprehensive picture – it can include time spent or saved, quality of life and environmental improvements and can encompass more 'intangible' things like the worth of political stability.

3.7 Another good example of where terminology can be misleading is in relation to economic calculations of the 'social rate of return' to investment in a person undertaking a degree. Discussions about the 'worth' of a degree are usually based around the idea that having a degree may increase a graduate's lifetime earnings. There is a considerable body of research into this area, which forecasts the 'lifetime earnings' of a graduate compared to a non-graduate and undertakes economic analysis of what is called the 'private rate of return' and the 'social rate of return' on the investment made in higher education. Generally speaking one might assume that 'social rate of return' means a 'social value' or the 'rate of return to society.' But the use of 'social rate of return' in formal economic literature on rates of return to graduation is more limited.

3.8 In this literature, the meaning of 'private rate of return' is fairly straightforward – this is the *financial return to the private individual participating in higher education*. However the 'social rate of return' does NOT mean the 'return to society'. It just means the *financial return to the Exchequer (the 'public purse')*, estimated through forecast tax 'take' on the higher graduate earnings. This latter example is particularly important to note in the current Higher Education policy context, as many of the arguments for and against graduate contributions to the cost of higher education revolve around the calculation of 'rates of return' – and in England the current policy appears predicated on the belief that the private rate of financial return is higher than the 'social' – *i.e. Public Purse* financial rate of return. However in other parts of the UK, policy is being formulated on the belief that there are other benefits to society not captured in these traditional financial rates of return calculations - and that if measures of such additional benefits could be included, we could see a truer 'social' rate of return, the return to wider society, which would justify continued public investment.¹⁹

3.9 So what do we mean when we talk about 'social value' of higher education? For some people 'social value' means the 'additional benefits' to society arising from universities' wider engagement activities such as working with local communities and providing civic leadership; for others it is related to broader longer term and less immediately obvious benefits – such as an observed association between levels of higher education and better health in society at large.²⁰

3.10 In this report we propose that social value is an overall reflection of the 'worth' of higher education to society and is a further translation and interpretation of economic value. In a holistic valuation, overall social value would subsume all the value generated through teaching, research, knowledge exchange and identifiable externalities (broader effects), rather than being something 'separate' or an 'extra' benefit.

3.11 In Part 3 we will show how an holistic approach to social value can be taken, through the application of an agreed system of 'weights' to an economic valuation. The system of 'weights' would be those that are agreed to reflect the social choices and social preferences of the society and culture in which we live. (To that extent it may be argued that 'social value' of higher education would indeed be linked to the 'values' of the society in which it is located.)

3.12 There is a further complication when considering meanings and definitions in that in discussions about higher education 'value' and 'impact' are sometimes used interchangeably when they do not always mean the same thing. A piece of commissioned research can have considerable economic value, for example, but it may be much more difficult to discern a specific 'impact', e.g. if the client decides not to publish. We would also flag that there is a further careful distinction required between 'outputs' of higher education and 'outcomes' from higher education. 'Outputs' and 'Outcomes' are different parts of the process that may lead to an impact. 'Outputs' are the things a University can actually produce or deliver. 'Outcomes' are the eventual benefits that may result from the delivery of the University 'outputs', but the link between the output and the outcome is more diffuse.

3.13 This will become clearer in Part 3 where we will show how higher education outputs can be given a clear value but where outcomes and impacts can frequently be beyond the control of the higher education institution. For example, a university 'output' may be a research paper, on, say, aspects of copyright law being a barrier to innovation. Say then that the relevant copyright law is subsequently changed to improve conditions for innovation (an outcome). The university research paper (an output) may have contributed to the subsequent change in the law and improved conditions for innovation (an outcome), but it will not have been the only factor involved (other factors could include, for example, other research papers, commercial or industry imperatives, European legislative issues etc.). The university had no control over these additional factors. If the law is not in fact changed, this does not mean that the research paper was not good enough, it could equally have been because of these other factors beyond the control of the University. The university output (research paper) would still have value, even though there was no discernable outcome.

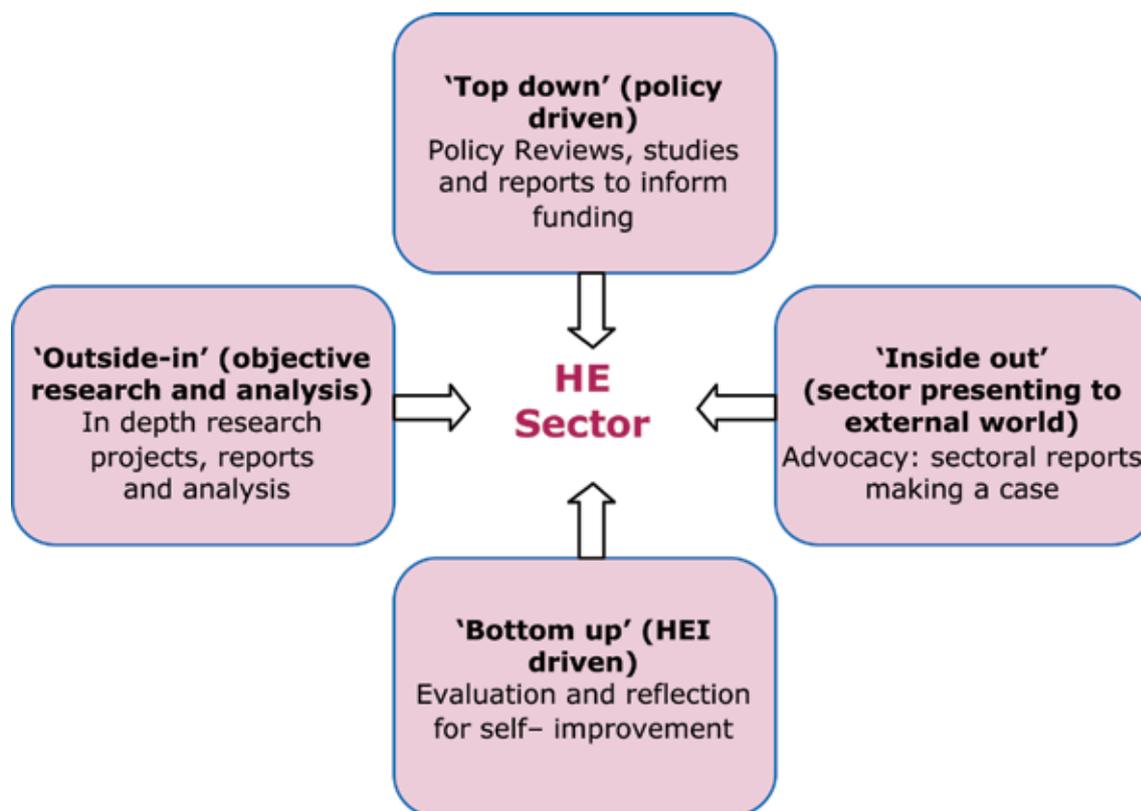
4. The current evidence base for higher education impact and value

4.1 Over the past 20 years the drive for evidence of return on public investment has generated an extensive body of data, research reports and studies of different types relating to value created by higher education or to its 'impact.' This has included studies by sectoral organisations such as Universities UK, individual universities studying their own organisational impact, commissioned research and consultancy for the Funding Councils and Research Councils, research and policy reviews by government organisations as well as a body of academic research, for instance on universities' contribution to innovation and competitiveness. Extensive data are collected by the Higher Education Statistics Agency and others. This provides a wealth of potential information and has shed considerable light on some aspects of universities' contribution to society.

4.2 However much of the amassed evidence is disparate, with most of it in the form of 'grey literature'²¹ conducted for different purposes, using different methodologies and also focussing on different things. Attempting to pull together the different pieces of evidence to assess the contribution of higher education is more akin to trying to make a single picture out of pieces from several different jigsaws.

4.3 Figure 1 below categorises the types of extant evidence from the last 2 decades into 4 main groups according to their primary 'purpose' or motivation. (There may be an element of overlap between the various kinds, but this is a summary outline.)

Figure 1: Capturing the social value of universities: the current HE evidence base



4.4 The four categories identified are:

- 4.4.1 'Top-Down' – evidence emerging from government-driven or funding council-driven policy and planning reviews, strategy documents, reports and inquiries. Such documents include the National Committee of Inquiry into Higher Education (*The Dearing Report 1997*), the Lambert Review (2003), the Warry Report (2006), Higher Ambitions (2009), the Browne Review (2010), as well as various sets of officially gathered or presented datasets about Higher Education (from the Higher Education Statistics Agency, for example) that are part of statutory reporting requirements. These documents and reports have been driven by questions about funding of universities (the Dearing Inquiry was established as a result of the perceived 'funding crisis' of UK Higher Education in the 1990s), or the role of universities and expectations on Universities (e.g. The Lambert Review examining university- business relationships). The category also includes a range of studies commissioned by the Research Councils (commissioned consultancy studies rather than research awards), such as *Measuring the Impact of ESRC Funding* (Frontier Economics 2009).
- 4.4.2 'Bottom Up' – evidence compiled largely from an institutional perspective and linked to institutional planning and governance processes. This includes evaluation and 'benchmarking' activities for example of a university's role in its region such as that undertaken through the OECD Institutional Management in Higher Education programme (IMHE), or the recent *Universities that Count* initiative. This type of evidence can shed light on issues that an institution may consider important either for its own planning processes or because the University perceives these issues to be important to other external parties with whom it wishes to engage.

- 4.4.3 'Inside-Out' - this refers to evidence that has been gathered, analysed and is presented almost wholly for institutional or sectoral advocacy purposes - generally examples of universities or the sector 'making their case.' The documentary evidence produced can be excellent and well grounded - the 1994 'Universities and Communities' review for example (Goddard et al for Universities UK) remains a powerful and comprehensive research report that has stood the test of time; but there is also a stream of more ephemeral and sometimes more superficial reports.
- 4.4.4 'Outside-In' - this category includes objective analysis of a range of aspects of higher education: mainly independent academic research, frequently specialist in nature, such as the body of economic literature examining 'rates of return' to graduation. The main point about this body of work is that while it is driven to examine particular aspects of HE from an objective and theoretically rigorous perspective it is limited in the aspects of higher education that it covers. There has been surprisingly little academic research into higher education in recent times. There is a substantial body of research about methods of teaching and learning and the educational process but very little about higher education institutions, how they operate, what they do and to what end.²²

4.5 As we have already noted, the evidence base has evolved in a disparate fashion in large part due to the differing motivations or purposes of different studies or data collection exercises. The extant evidence base can also be considered in terms of the type of evidence it presents - qualitative or quantitative etc. and also in its breadth of coverage, e.g. economy-wide (macro), sector-wide (mezzo) or at the level of the individual institution or individual experience (micro). A matrix categorising some of the key datasets, recent documents and studies according to the types of evidence and the breadth of coverage and focus is included as Appendix 1.

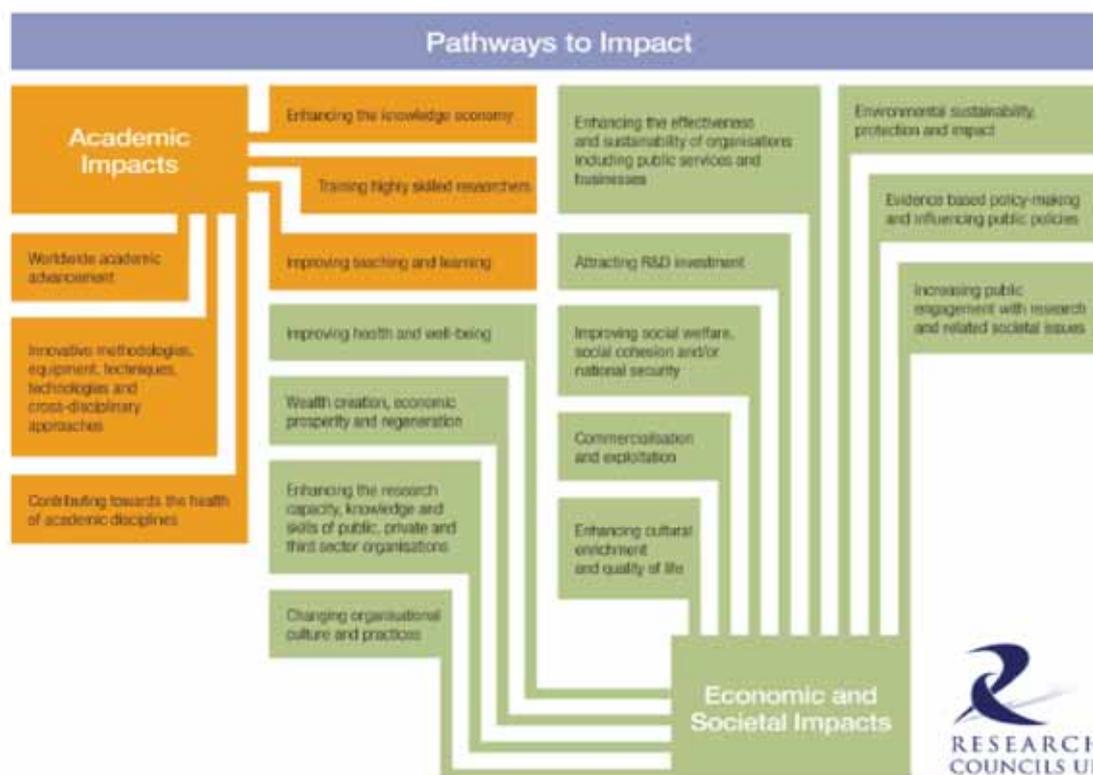
4.6 The matrix reveals that, considering both 'motivation' and 'type/breadth' of evidence, there has been a preponderance of qualitative approaches and an emphasis on institutional level studies. There are an abundance of case studies at individual institutional or even single project level; there are also a growing number of 'benchmarking frameworks' - several exist to examine the regional contribution of HEIs and HEI community engagement. The most recent development of this type is '*Universities That Count*',²³ (now rebranded *Learning in Future Environments*) which seeks to help universities reflect on their 'social and environmental responsibilities.' However, while these can provide evidence at a 'micro-level' and can clearly be very useful for reflection and self-evaluation in the planning and management of university activities, it is difficult to generalise from case studies and benchmarking exercises or take overall sectoral (mezzo level) lessons from them. They have no locus at all in terms of providing evidence at an economy wide or society-wide (macro) level.

4.7 This can be seen as problematic if seeking evidence that could provide firm foundations for resource allocation decisions at a sectoral level. HEFCE in 2009/10 ran a series of pilot 'micro studies' focused on identifying potential ways metrics could be devised to reflect the degree of wider engagement of HEIs; however, the outputs remain more case study based. There is very little in depth research on 'externalities' or wider effects. We could not identify any research that took a more holistic approach encompassing all aspects of higher education work (apart from the Kelly et al *Towards an estimate of the economic value of Scottish Higher education institution outputs* (2005,2008) which is the basis of the approach we will discuss in Part 3 of this report). There have been some new 'economy-wide' or 'macro' level analyses through the application of economic 'Computable General Equilibrium (CGE) modelling' of higher education (by McGregor et al, as part of the ESRC/HE Funding bodies *Impact of HEIs on regional economies initiative*). The CGE developments are focused on ways to incorporate broader effects of HE within an economic model but its application to higher education is still in its experimental stages.

4.8 Even some of the most discussed and prominent frameworks in higher education at present - which are linked to resource allocation decisions - namely the 'Pathways to Impact' framework of the Research Councils and the Impact element of the upcoming Research Excellence Framework (REF) - are reliant on case study rather than more systemic evidence.

4.9 Figure 2 below shows the broad potential 'impacts' (both academic and wider societal impacts) that researchers are encouraged to think about in preparation of their 'Pathways to Impact Plan' required in applications to the Research Councils for funding - in terms of how their research may contribute to these.

Figure 2: Pathways to Impact



Source RCUK

4.10 Both the 'Pathways to Impact' plan and the evidence required for the REF encourage serious reflection on the channels through which research might make a broader impact – on the economy, on society, culture, quality of life etc; but they do not provide any direct way of capturing these, nor suggest objective metrics. To some extent it would appear that it is hoped that somehow through the reporting process itself individual institutional returns to the REF may give some future ideas on how to capture impact and develop the concept further (the guidelines allow for 'impact' to be demonstrated over time - from research going back several years – inviting institutions to come up with relevant evidence).

4.11 From looking at the 'tapestry' of different kinds of documents and different kinds of evidence it seems that the only economy-wide (macro-level) information comes from quantitative economic modelling and statistical or econometric analyses of the available datasets (such as the *Destinations of Higher Education Leavers* (DHLE) data by the Higher Education Statistical Agency). However, conversely, these macro level analyses are not sufficiently fine-grained for micro-level (institutional) analysis.

4.12 A key message emerging from examination of the type and breadth of available evidence is that no current single document, review or methodological approach encompasses every aspect (teaching, research, knowledge exchange and everything else) or level (micro, mezzo and macro) of higher education.

5. Current thinking about how higher education makes an impact

5.1 Seeking to extrapolate key points from the (albeit disparate, sometimes conflicting and diffuse) evidence discussed in section 5, University interactions are broadly thought to make an impact on society in four key ways:

- 5.1.1 The University as an economic actor – the impact of the university as a business and the higher education sector as an industry – as an economic ‘actor’ in itself.
- 5.1.2 Higher Education increasing the skills base and ‘absorptive capacity’²⁴ of the economy through its students and graduates.
- 5.1.3 Research and innovation and knowledge exchange generating benefits to the host economy.
- 5.1.4 Through wider social engagement – this includes both intended impacts (through focused public engagement for instance) and unintended, ‘accidental,’ or ‘side effects’ (‘externalities’) arising from universities’ actions and by their simple existence as important societal or civic institutions.

5.2 The extent to which we are currently able to capture and ‘measure’ all of these impacts remains limited. The area with which we can speak with most confidence relates to the first one mentioned above i.e. The University as an economic actor – the impact of the university as a business and the higher education sector as an industry (5.1.1) There are methodologically sound and recognised approaches to analysing the expenditure impact of universities and indeed the current authors have conducted many such studies of the economic expenditure impact of both the UK HE sector as a whole and of individual universities.²⁵ However, these studies do not place a value on the actual work in which universities engage.

5.3 Turning to the second area, Higher Education increasing the skills base and absorptive capacity of the economy through students and graduates (5.1.2); the most extensive research on the impact of graduates has tended to focus on the financial benefits to both the individual and to the Exchequer arising from graduation – reflected in ‘Rates of Return’ literature. This is based around ‘human capital theory’ which considers higher education to be an element in increasing the productivity of workers. Additional productivity is measured through the ‘graduate premium’ i.e. the net difference in earnings between a graduate and non-graduate. However it should be noted that traditional analysis of ‘rates of return’ does not include any non-financial or non-market benefits that may arise from graduation, but is focused solely upon the earnings differential.²⁶

5.4 In relation to the impact of Research and innovation and knowledge exchange (5.1.3) there is a growing body of research examining different aspects of universities’ role in the development of ‘innovation systems’ and impact of university-business interactions. Some of the most recent research in this regard has emerged from the Impact of HEIs on Regional Economies initiative and also from the UK-IRC.²⁷ At a ‘micro’ level, the new Research Excellence Framework is also seeking evidence for the impact of individual pieces of research and considerable effort has gone into the development of an ‘outcomes framework’ to help assessment. This includes consideration of broader ‘societal’ impact but is based on case study rather than empirical analysis.

5.5 With regard to Wider societal engagement and wider impact (5.1.4), this is the least rigorously researched area, but one which is key to considerations of the role universities may play in society and one about which many claims are made. This is considered in some more detail in section 6 below.

6. The evidence base for wider societal engagement and wider impact

6.1 One of the issues in relation to assessing the value of wider societal engagement is that there is a lack of comprehensive information or data on what universities actually do. A 2006 report to the Economic and Social Research Council (ESRC) looking at research on HEI-community interactions (Holdsworth and Quinn),²⁸ identified a key problem as being the lack of systematic knowledge about the activities in which HEIs actually engage. Bogdanovic et al (2006)²⁹ also stressed the absence of academic research on wider university engagement:

"The search for academic texts on 'civic engagement' in the UK has not proved very fruitful... in terms of 'grey' literature our impression is that the information available is fragmented, unstructured and produced by a wide range of bodies and agencies with different agendas and where higher education institutions do not appear to be leaders..."

6.2 There have also been a number of studies and reports in recent years seeking to improve the evidence base relating to wider societal engagement. These have looked at aspects of public engagement, community engagement and knowledge exchange (e.g. the PACEC 2010 report for HEFCE *Knowledge Exchange and the generation of community and civic impacts* and a 2009 NCCPE review *Auditing, Benchmarking and Evaluating Public Engagement* (Hart & Northmore) which provides a good overview of a range of tools in use by institutions).

6.3 However even with these new studies, ways to evaluate wider engagement remains the least researched area. The authors of the 2009 NCCPE paper also commented (in a related article about the findings from the study). *"The literature search confirmed the impression that the development of effective audit and evaluation tools for university public engagement is still at a formative stage."* Hart & Northmore (2010)³⁰

6.4 One of the main difficulties with capturing and assessing social value and wider HEI impact in any quantitative way is that it may be generated by HEI activities that are not priced in the market and so are not captured in measures of financial value, in monetary transactions and flows. This could include, for example, the unpaid contribution made by senior academic experts to government advisory committees (sometimes very important or high profile committees e.g. on public health.) Recognition that higher education institutions generate non-market value and impact is key to finding quantitative ways to capture wider social value. With the introduction of the Higher Education Community Business interaction survey (HE-BCIS), there have been some attempts to collect information on some of the non market activities of HEIs such as the delivery of public and open lectures – but even with the HEB-CIS there remains a reliance on financial data to be used as a 'proxy' indicator for other interactions. The table below attempts to highlight some of the differences between market and non-market impacts.

Figure 3: Types of HEI impact

	Private	Social
Market	E.g. Higher wages, higher employment rate (captured in the 'graduate premium'); patents and spin outs	E.g. Productivity spillovers from HEI R&D, productivity spillovers from graduates to non-graduates and other graduates
Non-market	E.g. Better health, improved longevity, improved child health, better educational achievements, happiness	E.g. Rule of law, human rights, political stability, democratization, civic society, lower crime rates

(Adapted from Lisenkova, 2010)³¹

6.5 The limitations of financial value measurement for non-market impacts have led to a number of attempts in other sectors to think of an alternative way to capture value. These have included the concept of 'public value creation' as part of a management and governance framework for the public sector and for non-profit organisations. Other approaches such as Social Auditing or Social Return on Investment (SROI) have also been mooted. These will be discussed subsequently. For higher education specifically there have been experiments in extending human capital analysis. The latter, developed by economist Walter McMahon in the US, incorporates measurement of broader 'non-market' social and private benefits into the calculation of 'rates of return.'

6.6 McMahon's approach is a new extension to 'human capital theory.' Traditionally human capital theory regards higher education as increasing the productivity of workers. Additional productivity is measured through the 'graduate premium' i.e. the net difference in earnings between a graduate and a comparable non-graduate. It does not include any non financial or non market benefits (either private or social) that may arise. As we have flagged in earlier discussion about 'rates of return' to graduation (Section 3), a focus purely on financial returns may 'miss out' an important dimension of higher education benefits.

6.7 Walter McMahon in his 2009 book *Higher Learning, Greater Good: The Private and Social benefits of Higher Education* proposes extending human capital analysis to capture all of the benefits generated by higher education, including indirect effects such as graduates being more likely to be active citizens and play a role in civic society. He also includes inter-generational effects such as graduates positively influencing the health of others e.g. of their children. Many of the non-market benefits are private benefits (enjoyed mainly by the individual and their family rather than by the rest of society) but there are also significant non-market benefits to the rest of society. He has developed an empirical framework within which benefits can be estimated.

6.8 In the UK some experimental work has been undertaken by Hermannsson et al³² to incorporate McMahon's approach to estimating benefits within an economic modelling system for higher education. A modelled analysis for Scotland looking ahead to 2050 projects an increase in GDP of 4.2% (baseline scenario) attributable to the higher productivity of a graduate workforce. When the aggregate social benefits are taken into account the impact on GDP increases to between 6.2 - 9.0% (depending on the assumptions.) In other words, these results suggest that the impact of non-market benefits to society generated by degree education is potentially greater than the market benefits.

6.9 The new approach proposed by McMahon could begin to generate system wide and macro level long run evidence for the impact of higher education. However, as discussed in section 6.4 macro-level evidence of this nature does not enable institutional level analysis.

6.10 Given the limitations of the current evidence base for higher education we have reviewed the elements that in our view are needed for a more comprehensive or holistic valuation framework for Universities. The criteria are outlined in Figure 4 below.

6.11 In order to enable assessment at macro, mezzo and micro levels output data needs to be generated at the individual HEI level. This is simply because data generated at the individual HEI level can be aggregated upwards for sectoral (mezzo) or economy-wide (macro) purposes but if data is only generated or collected at, e.g. sectoral (mezzo) level, it is not possible to subsequently disaggregate this dataset to drill down to individual institutional level.

Figure 4: A holistic university valuation framework

- Uses fundamentally sound methodology, based on widely recognised theoretical principles.
- Covers all of the activities in which universities engage and includes non-market as well as market activities.
- Is capable of application and interpretation at different levels of analysis: economy-wide (macro), sector-level (mezzo), individual institutional level (micro). In other words, it is sufficiently fine grained to capture value generated at institutional level, as well as being applicable at sector level and can also observe value being generated at the macro or economy-wide level.
- Has been empirically tested at these levels, with sufficient available input data to enable rigorous analysis and inferences to be drawn.

6.12 A framework that met all of these criteria would stand a very good chance of delivering meaningful information and of being taken seriously by policy makers and funders. (The SMEV approach that we propose in Part 3 is aiming towards compliance with these criteria.)

6.13 The framework would be further enhanced if its robust quantitative approach was also complemented by qualitative analysis that illustrated and explained the implications of the quantitative results. This could be a framework that could both 'tell a story' AND back it up with hard numbers. However, to the best of our awareness, this ideal framework analysis has not yet been achieved for higher education in any country.

Part 2

7. Measuring social value in the third sector and cultural sector

7.1 In this section we consider some of the key approaches in other sectors to assessing value generation, in particular those used by the 'third sector' and non-profit-making organisations as well as by parts of the public sector (such as the BBC's approach and the 'public value test').

7.2 The 'Third Sector' is a term that in the UK broadly refers to voluntary and not for profit organisations. The Higher Education Sector shares many characteristics with the third sector, notably their not-for-profit status as well as the non-market or non-commercial nature of many of their activities. The drive to measure social value has been considered in most depth by organisations in the third sector and by philanthropic funders, such as the Gates Foundation.³³

7.3 As noted earlier, the drive for social value measurement in the third sector has been primarily related to resources – both by the need to be able to demonstrate to funders that their investments are effective, as well as to help the organisations' own internal management of resources – to be sure they are spending money on the right things). The issues faced by the third sector also apply to non-profit making cultural organisations in the cultural sector³⁴ and there has been extensive exploration of how to measure 'value' in the cultural sector (including by museums, libraries etc.), so we are also including the 'cultural sector' in this part of the discussion.

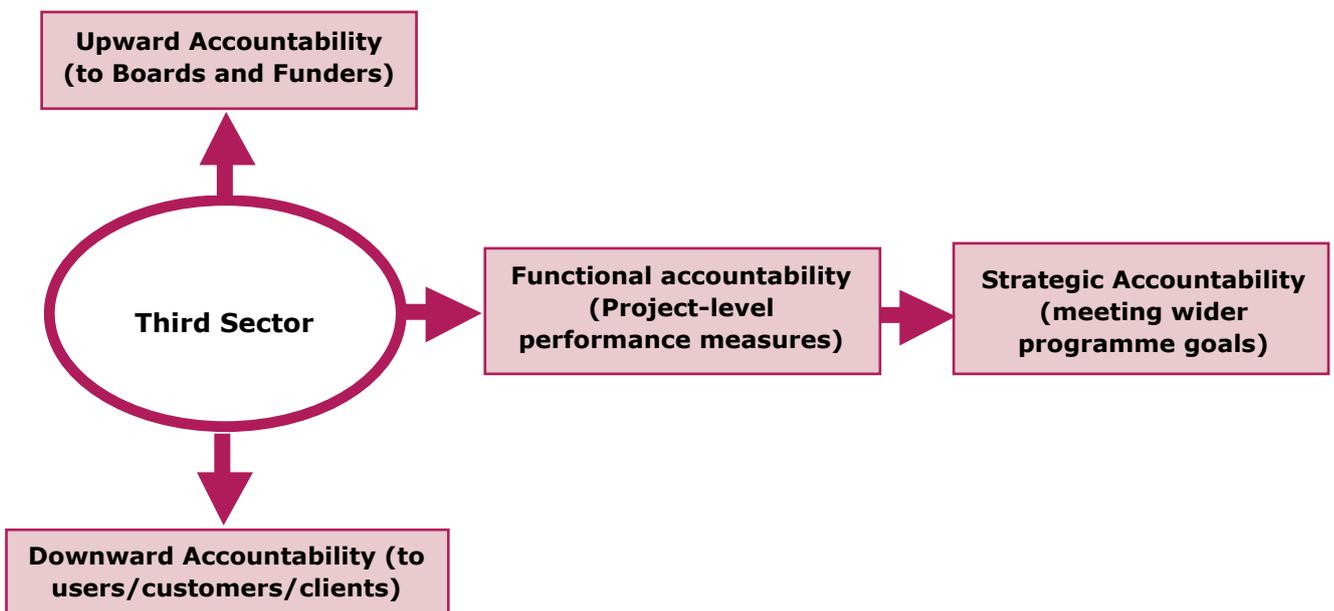
7.4 Very common themes to those in higher education run through all the literature concerning measurement of value in the third sector, including presentation of similar challenges – valuation of non market activities, difficulties with terminology, the need to make a funding case and the disparate data situation.

7.5 An insightful and comprehensive collection of papers presenting key elements of the problem is a 2001 series of papers based on discussion at a Carnegie Corporation conference to discuss '*Measuring the Impact of the Non-Profit Sector*' (Eds: Flynn & Hodgkinson). The preface to the collection summarises the imperative facing the non-profit sector in a very similar way to that currently facing UK HE:

"One of the major tasks facing non-profit sector researchers and practitioners is the development of empirical tools to measure the inherent worth of non-profit organisations and the sector as a whole over time. This effort will be demanding and complex but necessary as the sector is called upon to demonstrate its accomplishments and impact in an era of greater accountability to the public..."

7.6 Measurement approaches in the third sector have been similar to those in higher education. Flynn & Hodgkinson characterise them as:

Figure 5: Performance measures in the third sector



7.7 They also conclude that despite these many different accountability processes:

"the non-profit sector is many years away from being able to measure its impact on society. First we must make strides towards better measurement of the sector's outputs and outcomes from which a cohesive theory of behaviour might emerge..."

7.8 Overall from these papers there appears much less discomfort in the third sector (in the USA at least) with the objective of measuring social value than appears in UK higher education. The need to find ways to argue a funding case is the strongest driver – but there is also recognition that social value measurement could help the organisations themselves to improve their own management and performance. Di Maggio (2001) highlights that the drive to find measures of value may in itself prove enlightening:

"On balance, however, the potential of impact analysis for enhancing the reflexivity of the non-profit sector, for encouraging dialogue between researchers and practitioners and for creating sophisticated ways of thinking about the sector and its goals strikes me as making the quest worthwhile. True, assessing the sector's impact is, strictly speaking, impossible. But then alchemists made significant contributions to modern chemistry, even though they never succeeded in turning lead into gold..."³⁵

7.9 In the UK, most consideration of approaches to social value measurement have come through the New Economics Foundation (nef), the Work foundation and DEMOS, (with the latter having also made a significant contribution to writing about the cultural sector). The nef has developed a useful reference site with guides to a wide range of valuation tools in use (see: <http://www.proveandimprove.org/new/>). This includes summaries and definitions of a range of techniques and approaches to impact measurement and performance evaluation and improvement.

7.10 Approaches in use include, for example, AA1000AS, DTA Fit for purpose Eco-mapping, EFQM Model, Investors in People, GRI Guidelines as well as Social Accounting, Social Enterprise Balanced scorecard, the 'Third Sector Performance Dashboard' and others.

7.11 The sheer diversity of tools listed (and they do not include all variants – e.g. in Scotland a report by Forth Associates for Communities Scotland *Making the Case – A Social Added Value Guide*³⁶ focussed on a range of other additional named 'methods' such as 'ABCD' – Achieving Better Community Development) reveals part of the current problem facing the third sector in seeking to 'demonstrate impact' or 'measure value.'

7.12 There is no single recognised approach to assessing value; rather there is a plethora of 'tools', sometimes very similar, but they are not necessarily consistent in approach nor sufficiently theoretically grounded for rigorous analysis. This has been recognised by members of the SROI network – which currently has a blog commentary on the subject of 'Lack of consistency':

"...The biggest problem that is faced by all of us interested in social value, impact, returns - whatever language you prefer - is the lack of consistency. And yet I still keep hearing 'we can't support one approach' or 'organisations should be able to choose methods that are most appropriate to them' or 'small and start up organisations should be able to do something simple'. This general difficulty to go for consistency and standardisation is costing us dearly, not just in organisations that aim to create social value but in all businesses, since all businesses have wider effects than those reflected in their financial accounts. Of course many would not think a choice is required, that standardisation is not necessary. And of course if we had consistency and standardisation there would be some organisations that would not create as much value as they had previously argued, and some activities that do create value that would lose out.

But this is costing us all far more than we would lose. To imagine how much, think about a world in which these arguments - 'we can't support one approach' etc etc - had won out for financial accounting. All organisations could use whatever approach, whatever basic principles, whatever frameworks, they wanted in reporting on financial value. Not only in how they accounted for transactions but in how they then presented the account." (SROI Network Blog)

7.13 A similar message emerges from a recent report about value measurement in the cultural sector:

"The cultural sector faces the conundrum of proving its value in a way that can be understood by decision-makers ...it will not be enough for arts and culture to resort to claiming to be a unique or special case compared with other government sectors, the cultural sector will need to use the tools and concepts of economics to fully state their benefits in the prevailing language of policy appraisal and evaluation...." **O'Brien 2010**³⁷

7.14 There are also a range of benchmarking tools and moves to identify and codify outcomes. For instance the Museums Libraries and Archives Council drafted an 'outcomes framework' seeking how their work contributed to broader Policy Priorities such as 'Healthier Communities and Older People,' and 'Economic Development and Regeneration.'³⁸

7.15 Many benchmarking and 'outcome' identification frameworks can be useful to the internal management of an institution, assisting the organisation to reflect on its priorities and objectives. However these methods are also resource intensive and data hungry without the data being collected in a type or format that could be used convincingly for external funding justifications. When referring to the MLA outcomes indicator approach O'Brien (2010) pointed out:

"Tellingly these methods fall foul of the same issues identified by Selwood in her 2001 critique of the gathering of cultural statistics, for example the overproduction of data which is not directly used in policymaking and lacks robustness when compared to other forms of evidence gathered for use in other areas of policy..."

7.16 More information on the wide range of tools and methods can be obtained from the nef site – but the most commonly discussed approaches include 'Social Accounting and Audit SAA (from which the notion of the 'triple bottom line' comes) and 'Social Return on Investment' (SROI). These are considered in the sections immediately following.

8. Social Accounting and Audit

8.1 Social Accounting and Audit (SAA) is an evaluation framework for an organisation to describe and present how it is meeting its aims and objectives in terms of its social, environmental and financial or economic impact – the so-called 'triple bottom line.'³⁹ Organisations can then present regular 'sets of accounts' showing their progress towards objectives. An example of an organisation producing series of social accounts is provided by the 'All Saints Action Network' – a community enterprise in the West Midlands, which has published annual 'social accounts' for several years. http://www.asan.org.uk/page.php?identity=social_accounting_and_audit

8.2 A useful summary of the 'state of the art' in SAA was compiled by John Pearce and Alan Key (Really Telling Accounts! 2008),⁴⁰ which took an overview of how SAA had been used by a range of UK organisations over the last decade or so and also examined where SAA related to the SROI approach, including drafting some 'common principles' shared by SAA and SROI.

8.3 Social Accounting appears to essentially be a planning and performance measurement tool, with the potential for external validation by independent 'social auditors' rather than a way to estimate value generated. Many organisations using this approach appear to have found it a valuable reflective and planning tool. The Chairman of the ASAN network commented in the introduction to the 2009 accounts:

"The Social Accounts are one way in which we at ASAN can understand how the organisation is developing."

8.4 Much of the SAA involves a similar process to other self evaluation and benchmarking tools developed for analysis of higher education planning and performance - for example benchmarking of regional and community engagement (such as that utilised by the PASCAL Observatory).⁴¹ Participation in PASCAL assessments can also involve having an independent audit and 'benchmarking' undertaken by external experts.

8.5 The OECD International Management in Higher Education (IMHE) Programme for Universities and Regional Engagement also used a self assessment process followed by external validation. The current *Universities that Count* initiative is also relevant here. All of these processes are more closely fitted to the circumstances of higher education than Social Accounting and Audit and indeed the higher education sector as a whole is fairly sophisticated in its use of planning and progress mapping (not least because of the many assessments universities undergo, from QAA to the REF as well as the funding requirement to produce regular strategic plans.)

8.6 We would suggest SAA may be most helpful to smaller voluntary organisations who have not perhaps previously had much experience of planning and evaluation processes. However, in our view it does not have a great deal new to offer higher education for examining social value generation, given that there are many other extensive and sophisticated benchmarking, audit and planning tools already available to higher education that are most closely suited to the needs of HEIs.⁴²

9. Social Return on Investment

9.1 Social Return on Investment (SROI) is a relatively recent approach to social valuation in the third sector which originated in the late 1990s from approaches adopted by a philanthropic funder in the USA (the Roberts Enterprise Development Fund) to assess their grant-making activities. It has been widely promoted in the UK by the New Economics Foundation, who have developed a version which they feel is suited to the use by third sector organisations in the UK context.⁴³

9.2 SROI has built upon social accounting, partly to complement the work already taken forward by the proponents of SAA but its distinctive difference and more robust edge is that it also includes recognised economic cost-benefit analysis techniques so that a monetary value can be placed on benefits generated. This is with a view to calculating an SROI ratio of costs: benefits so that a quantitative 'social return on investment' can be calculated just as a financial return on investment can be calculated. It is not seeking to look at overall value generated e.g. the 'blended value'⁴⁴ but only on what is regarded as 'material' or judged as important for producing social return. 'Social' return in this case is specifically meant as encapsulating wider non-financial benefit

9.3 A fuller guide to the principles and practice of SROI is contained in: *Measuring Real Value: a DIY guide to Social Return on Investment* (nef) as well as in *A Guide to Social Return on Investment*, Cabinet Office (Office of the Third Sector).

9.4 Characteristics of SROI can be summarised as:

- Stakeholder involvement (consultation with both producers and users)
- Materiality (i.e. selection for analysis of activity considered to be important)
- Outcomes (an outcomes-based approach)
- Value (seeks to put an economic value on the outcomes)
- Transparency (seeks to make the process transparent)
- Verifiable (an emphasis on using evidence that can be verified)

9.5 SROI characteristics also begin to share similarities with other approaches to programme evaluation, in that, for example, they include the use of a 'theory of change' or 'logic model' (an 'Impact Map') where the organisation under analysis maps out the *Inputs, Outputs, Outcomes and Impacts* associated with their work. This initially may make SROI look more approachable for higher education, given the increasing use of such 'logic models' by the Research Councils and others as frameworks for assessing impact. SROI also uses similar 'language' such as 'pathways to impact.'

9.6 However SROI is focussed on the third sector and its usefulness at a higher education sectoral level is more limited; SROI is designed to be 'an outcomes-based measurement tool', to be used at project level or at organisation (micro) level to help make a specific funding case and to enhance organisational performance. Its emphasis on identifying stakeholders on a *project by project* basis and *only* selecting the activities that are thought to be 'material' (i.e. the ones 'thought' to matter) to generation of social benefit (effectively screening out the impact, benefits or detriment of other activities undertaken) means that findings cannot be generalised and it has much less potential for wider application e.g. at sectoral (mezzo) or economy wide level to inform policy.

9.7 The 'materiality' issue in particular could be seen to be a little troubling, in that it starts to push SROI firmly towards being an 'advocacy' tool alone, rather than more objective evaluation of value generated, since it already introduces subjective and self-selecting or self-justifying criteria. 'Materiality' for an SROI is about pre-selecting the areas of work already thought to be likely to generate value and then setting out to measure or demonstrate that value. However, in seeking evaluation at a broader level, fuller account would have to be taken of the impact of all of the organisational activities, not just those subjectively selected as 'material.'

9.8 SROI guidance material does not overcome the problems of how to measure outcomes (it acknowledges there is an issue of attribution and also that some outcomes may have happened anyway (which are called *deadweight* effects), but sidesteps the difficulty of determining these with rigour. This may be due to its more 'micro' or project based nature whereby the 'outcomes' can be more tightly defined and limited to specific objectives that are directly linked to outputs, e.g. a social enterprise aimed at helping people back into work may have an outcome of 'the numbers of people helped who are sustaining a job' which has a reasonably strong link for practical purposes with the output of 'the numbers helped into a job.'

9.9 SROI uses recognised economic techniques for the valuation (monetisation) of non-financial benefits, but it is focussed on doing this at single project or organisation level only – it is not designed as a holistic framework at sectoral or economy-wide level and there is a very strong risk of double counting of benefits if attempts are made to expand to the economy wide level, since the value of some of the identified benefits may already be captured in other measures.

9.10 For instance a recent nef report *Degrees of Value* used the nef SROI approach to study aspects of a number of UK universities in terms of their contribution to improving social mobility. The application of SROI principles estimated a social value to this in monetary terms. This is a useful analysis at micro level for those specific institutions; however it cannot be used to suggest new and previously unconsidered benefits of higher education at *economy wide* level.

9.11 This is because upward social mobility is a definitional consequence of taking a graduate level occupation. The positive financial impact on both the individual and on the public purse of taking a graduate level occupation is already captured within measures of the graduate premium and traditional financial rates of return – it is not necessary to find 'new' ways at economy-wide level to measure this impact, it is already included in the few traditional measures that exist.

9.12 The main point here is that at a micro level many studies can be of use and value. But it is not possible to simply 'add up' the results to get an overall economy 'macro' result.

9.13 Within the third sector itself SROI poses difficulties in implementation as it is a complex tool – valiant attempts have been made by nef in its guidance documentation to explain to users how apply complex analytical techniques such as calculating net present value and applying discount rates (financial techniques which need to be properly applied within the 'predictive SROI' approach). However a number of recent reports have highlighted that it remains very difficult, particularly for small organisations, to define the data needed, collect the relevant data and apply the techniques correctly.⁴⁵

9.14 The in-built subjectivity of some of the measures that SROI allows to be applied also causes problems for its ultimate credibility. For example, *Third Sector Online* in February 2010 reported that, at a conference discussing social value measurement Laurie Russell, chief executive of the Wise Group, a social enterprise that helps people into work, told delegates at the Voice10 conference that:

"he did 'not really trust' SROI, a system that measures organisations' social impact in financial terms. He said one organisation had claimed to have an SROI of more than £2,500 for every pound spent..."

9.15 The application of SROI has been very comprehensively trialled and studied in Scotland over a two year period of piloting, with Scottish Government and EU support. This was trialled across a diverse range of organisations and assessment made of its viability as a tool for both evaluative SROI and predictive SROI. This was part of the '*Investing in Impact*' project. Evaluative SROI is essentially evaluation of 'what has already happened.'" Predictive SROI is, as it sounds, forecasting the 'likely' social return on an investment.

Figure 6: Evaluative and predictive SROI

	Private	Social
Project/Enterprise life cycle stage	Projects or enterprises already underway	Projects or Enterprises at pre start-up stage
Focus of SROI	Measuring the value already created	Forecasting potential value of such activity
Relationship with existing SROI methodologies	Refinement of existing SROI methodologies and developing new ways of financialising value created	Development of a streamlined shorter SROI process which is less reliant on detailed research

Source: Adapted from 'Differences between Evaluative and Predictive SROI' in Chapter 1 Investing in Impact (Haldane Associates and Forth Sector 2008)

9.16 The 'Investing in Impact' project report describes SROI as an 'index of social return' and acknowledges that it holds considerable appeal for some organisations and investors because it 'speaks the language of finance.' The report concludes that SROI may have a place in the portfolio of measurement but that it requires much greater consistency and standardisation:

"We conclude that there is clear potential for, and indeed, something of an imperative to develop a consistent approach to measuring social impact achieved by social enterprises and other third sector organisations. SROI could form part of a long-term response to this challenge but we firmly believe that it needs much greater development before it can fulfil its potential and a need for a crucial mass of analyses before can be confidently said that what exists is a robust approach...also such development should be aligned with wider efforts in the impact measurement and evaluation field, with the aim of developing a common and consistent approach to social reporting for use by social enterprises and other third sector organisations..."⁴⁶

10. Frameworks for public value creation

10.1 In the public sector, meanwhile, another concept has been taking root, the idea of 'public value creation.' The notion of 'public value creation' had its origins in the 1990s work of Mark Moore⁴⁷ of Harvard Business School who proposed this concept as part of good practice for public sector organisation management and governance. It was essentially a framework which was developed in response to the need for a management model that reflected the different drivers and constraints faced by public sector managers compared to private sector managers.

10.2 Where private companies may be seeking to generate 'shareholder value', for the public sector (and also for 'not-for-profits'), Moore proposed that a good governance aim would be the generation of 'public value'. This concept has been further developed and refined since that time, including its being extensively elaborated in the UK context in a key 2002 Cabinet Office Paper,⁴⁸ *Creating Public Value: An analytical framework for public service reform* (Kelly et al 2002) as well as its practical implications and use being explored in some depth in a series of reports by the Work Foundation 'Public Value Consortium.'

10.3 A 'Public Value Framework' in its original form as a governance and management concept and tool, was adopted by the BBC with this becoming used as part of the 2004 negotiations for renewal of the charter. The BBC's application and use of Public Value, including the 'public value test' in its governance and management is described in more detail in Appendix 3.

10.4 The original concept of public value generation, as adopted by the BBC, was more linked to broader performance management and assurance of delivery against strategic goals rather than the 'measurement' of value generation. However, the concept – particularly as it has evolved and advanced

through the last decade – can be a compelling and attractive framework which helps to shape ways of thinking about broader value generation. Benington and Moore, in a 2011 collection of papers on Public Value (Public Value Theory and Practice), suggest that the Public Value Framework is even more relevant post the 2009 global economic and financial crisis than before, with government roles and responsibilities changing and "...The pressure to be 'doing more with less' has become stronger."⁴⁹

10.5 With another reflection on the difficulties in definitions and terminologies, Benington and Moore state that they want to sharpen the focus on 'public value' – which as a concept has been in danger of devaluation due to misuse:

"[We]...aim to sharpen the definition of public value (which is in danger of being used like an aerosol, sprayed around widely but hazily, with misty meanings which can indicate different things to different people..."

10.6 So what is the definition of 'Public Value?' At its most simple, public value means 'that which is valued by the public.' Government and public sector organisations should have as their goal the delivery of services that are valued and wanted, and they should be aiming to generate public value.

10.7 However the process of determining 'what the public wants' is recognised as complex and difficult. It is also not enough for something to simply be thought to be 'a good thing.' At the heart of the public value framework is the notion of choices and trade-offs, the drive to achieve *allocative efficiency*,⁵⁰ devoting resources to the 'right things' i.e. the things that the public want, as evidenced by their willingness to give up something in exchange – for example taxes to pay for healthcare, or giving up personal freedoms to ensure broader security, Kelly et al (2002) emphasized:

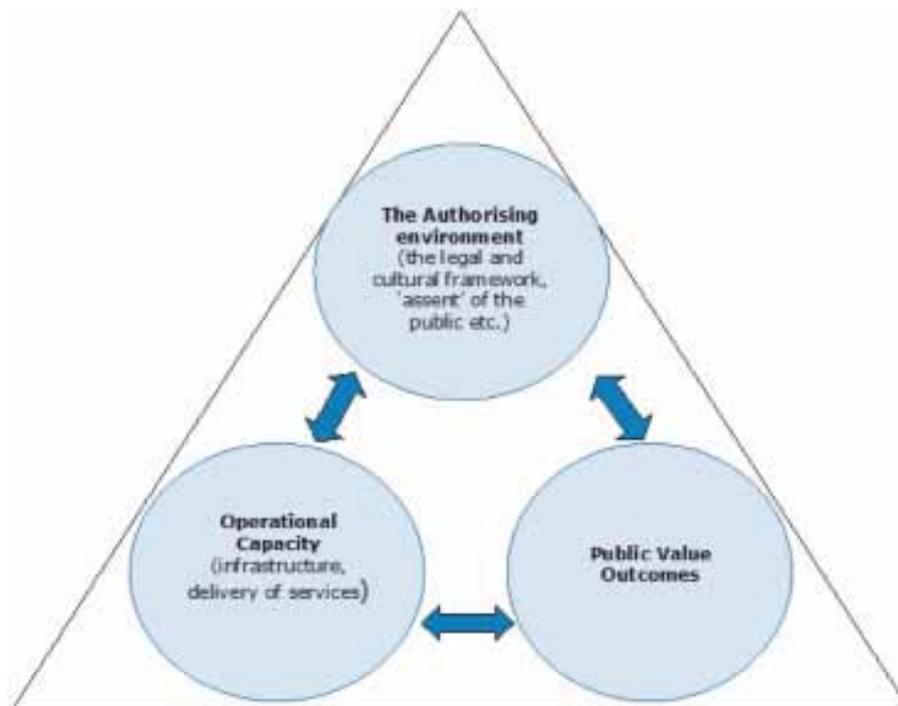
"It is only of value if citizens- either individually or collectively – are willing to give something up in return for it...if an opinion poll suggests that citizens would like government to spend more money on services but fails to indicate public willingness to pay for this course of action... [then this] does not constitute evidence that higher spending will increase public value..."⁵¹

10.8 Benington and Moore (2011) also highlight that generation of public value can be somewhat different from the generation of private value (which is traditionally considered as happening through individual consumers making their own private choices in a freely operating market) as the generation of public value is not always driven by individual choice. It has its 'dark side' as a key element determining 'public value' involves the use of the power of the state, compliance and regulation. They point out, for example, that the requirement to pay taxes or to pay fines is about the conferment of an 'obligation' on the citizen rather than the delivery of a service, and the point is:

"not to please or delight the client in the transaction!... this is a very different type of encounter and different kind of relationship with the public from that typical in the private market...instead of trying to satisfy the client, the goal is to encourage compliance with the obligation..."

10.9 This is part of the 'authorising environment in the 'strategic triangle' of public value as shown in Figure 7.

Figure 7: The strategic triangle of public value creation



Source: *Public Value, Theory and Practice* Benington & Moore 2011

10.10 The issue of how to decide 'what the public wants' and thereby enable identification of the public sector activities or services that generate public value, shares much common ground with the issue of how to decide 'what society values' from higher education.

10.11 In fact many of the principles underlying the public value framework are compatible with the 'Socially Modified Economic Valuation' approach that we will discuss in Section 3. They are also very similar to those used in economic valuations such as those cost-benefit analyses recommended by the HM Treasury Green Book to be applied as part of public programme evaluations.⁵²

10.12 The HM Treasury Green Book is a best practice guide in project and programme appraisal for all government central departments and executive agencies. It is intended to: "*improve the alignment of departmental and agency policies, programmes and projects with government priorities and the expectations of the public...*"⁵³ The Green Book gives recommendations and guidance on how economic, financial, social and environmental assessments should be combined and also has a number of detailed technical annexes including one explaining how to value non-market outputs. The Green Book is used across central government and compatibility with the Green Book and its sister guide the *Magenta Book*⁵⁴ is expected in appraisals of government policies, programmes and projects.

10.13 Advocates of public value generation framework have acknowledged this common ground with the Treasury Green Book and indeed some of the framework's key proponents Kelly et al (2002) and Mulgan et al (2011) draw specific attention to the usefulness of the methods employed in economic cost benefit analysis and the Treasury *Green Book* in helping inform a decision process about public value generation.

10.14 Mulgan (2011) also highlights the importance of finding ways to measure non-market public services and draws attention to another government report, the Atkinson Review⁵⁵ (ONS 2006), which recommended ways to identify the outputs of non-market public services so that they could be included in the UK's 'National Accounts'.⁵⁶ Mulgan was clear that valuation, metrics and measurement are important elements in assessing public value generation:

"Better metrics do not of themselves deliver better outcomes. You can't fatten a pig by weighing it. But if you don't have some means of weighing it you may find yourself unable to persuade others that it's as fat as you believe..." **Mulgan 2011**

Part 3

11. A Socially Modified Economic Valuation approach for higher education (SMEV)

11.1 Parts 1 and 2 of this report gave an overview of the current situation regarding valuation of university activities in the UK. We considered why valuation is necessary and gave a 'helicopter view' of the current evidence base as well as discussing a range of approaches adopted in the third sector and public sector, including the concept of public value generation. In this section we go on to propose a new, holistic, approach to measuring the value of higher education which we have called 'Socially modified economic valuation' (SMEV).

11.2 It is important to emphasize that SMEV has robust theoretical foundations, which are rooted in universally accepted economic theory.⁵⁷ Essentially SMEV is based on the application of economic cost-benefit analysis techniques to higher education outputs and follows accepted theory and practice for economic appraisals and programme evaluation – as recommended by, for example, the HM Treasury Green Book. Our development of SMEV for higher education has drawn on recognised economic source documents such as the System of National Accounts (SNA 93),⁵⁸ Eurostat⁵⁹ and World Bank Programme Evaluation Manuals to ensure rigorous compatibility with internationally recognised theory and practice in economic analysis. Therefore the methodology is not 'novel' but well tried and tested by major international agencies and used for programme evaluation across the world; all that is new is its application to higher education.

11.3 We have tried to make the explanation of SMEV in this report as approachable as possible for the generalist reader. The fuller technical detail and explanation of the underlying economic theory can be found in earlier project reports, which also include extensive analysis of how the SMEV approach to the valuation of outputs is compatible with that recommended by the Office of National Statistics *Atkinson Review* of 2006.⁶⁰

11.4 The SMEV is an *output-based* measurement approach, which is focussed on the higher education institutions, what they do and what they deliver.

11.5 As we have seen from the discussion in Parts 1 and 2, there are numerous other measurement approaches which are focussed on societal outcomes, or the broader desired 'impact' of a development, a policy or an initiative.

11.6 The difficulty with many 'outcomes-based' approaches is not only that the measurement of outcomes can be extremely difficult but, crucially, that they are not necessarily the most appropriate performance measures for universities. Broader outcomes (e.g. a healthier society) are the main point of interest for government policymakers looking from an overall planning perspective. However the HM Treasury Green Book itself acknowledges:

" Outcomes are the eventual benefits to society that proposals are intended to achieve...but outcomes sometimes cannot be directly measured, in which case it will often be appropriate to specify outputs, as intermediate steps along the way..."

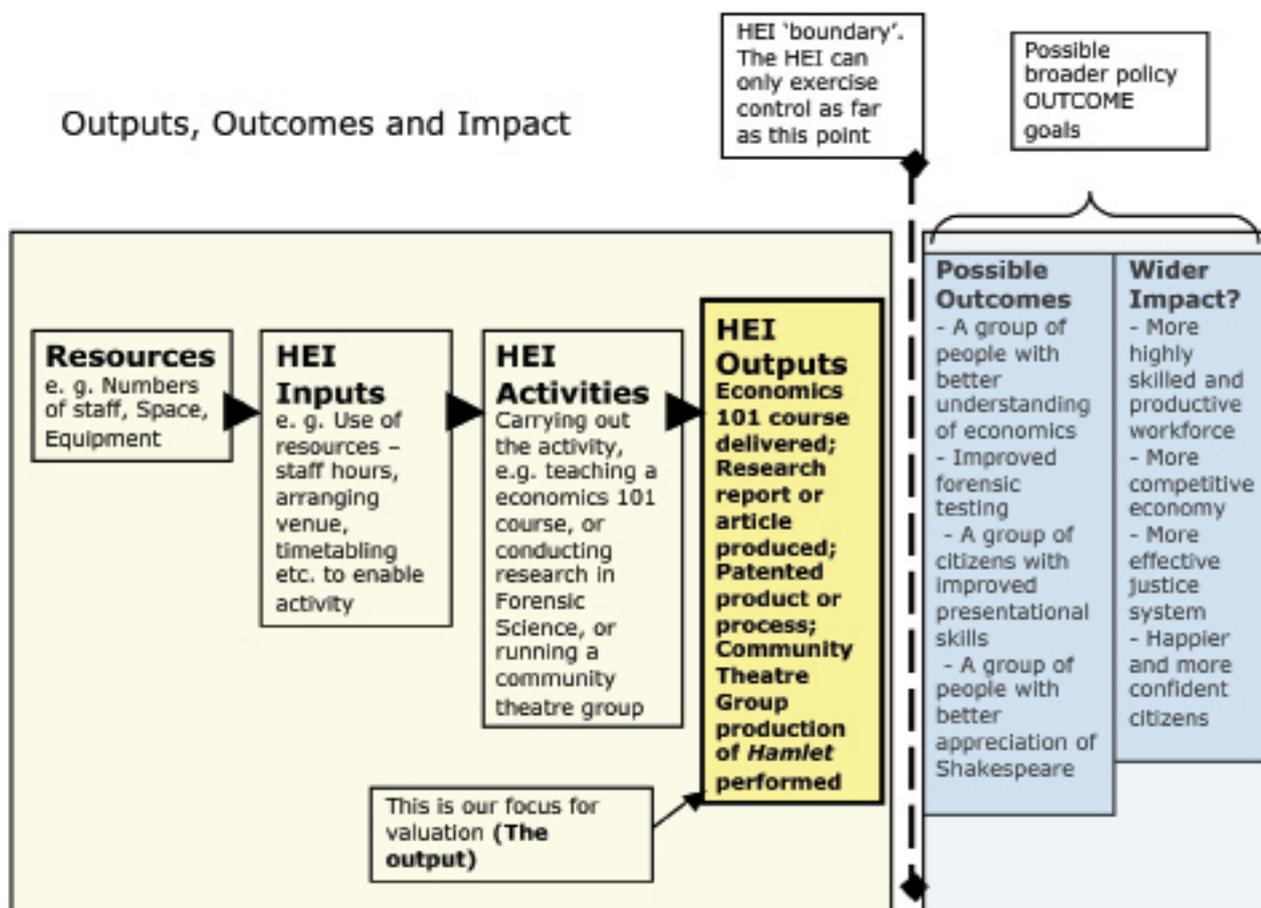
11.7 Outcomes (the eventual benefits to society) are often the result of a complex mix of factors; they are not always easily attributable to a single influence. Universities cannot deliver direct outcomes (e.g. a 'healthier society'), rather they can deliver outputs (e.g. 'deliver medical training'), which may or may not contribute towards the desired societal outcomes. Policy developed to encourage particular outcomes therefore needs to identify the actual outputs that are thought to contribute towards the eventual outcomes and encourage the production of those *outputs*.

11.8 This is illustrated in Figure 8 below, which presents the component elements of the chain of processes from resources and inputs to outcomes and impact. This is sometimes known as a 'theory of change' or 'logic model.' Universities can use resources to produce outputs – but the final outcomes arising cannot be guaranteed and other factors (possibly entirely unrelated) can be involved in the eventual outcome.

11.9 For example, a University may develop and patent a new process for possible use in forensic analysis. But then other factors are involved (e.g. able and willing investors and developers, market demand, particular economic climate) for that to translate into an outcome such as 'Improved forensic testing'. Even further factors, well beyond the University's control, would be involved for an outcome of a 'More effective justice system.'

11.10 When considering the value of universities, therefore, and especially if there is any thought of devising performance measures for universities, the focus must logically be on university outputs and what the universities actually do. (Otherwise the peculiar position could arise where universities are penalised for things they cannot help and rewarded for things which they have not in fact done.)

Figure 8: Outputs, outcomes and impact



11.11 In seeking to examine the value of universities, SMEV therefore is focussed on the University or Higher Education Institution outputs – what the university actually delivers. SMEV comprises:

1. an economic evaluation of university outputs and then,
2. an interpretation of the resultant economic evaluation in the light of societal goals, applying agreed 'social weights' to obtain a social valuation.

11.12 We will give an outline explanation of SMEV before going on to discuss some of the challenges and issues arising. In summary, the SMEV has 4 basic steps: Firstly the economic evaluation requires:

- Step 1: Identification of all university outputs
- Step 2: Quantification of all university outputs
- Step 3: Economic pricing of all university outputs

11.13 It should be borne in mind at this point that the pricing process (Step 3) is not about *financial* pricing and actual cash changing hands but about the *economic* pricing of the outputs (How this can be done is discussed in more detail in section 11).

11.14 The result of undertaking these three steps will reveal the full economic value generated by university outputs (Economic value = quantity x economic price).

11.15 The next step is about Social Valuation. The Social Valuation involves the use of a set of 'weights' that reflect the moral, social and political characteristics of society (they could be said, in effect, to be related to our society's perceived 'values').

Step 4: Apply the agreed 'social weights' to the results of the economic evaluation.

11.16 This step 4 will provide a Socially Modified Economic Valuation (SMEV) which can be interpreted as the 'Social Value' of the University's outputs. By applying social weights which are reflective of overall societal goals and desired outcomes, the social value is effectively being defined as the extent to which the university outputs contribute to society's desired outcomes.

11.17 The application of social weights is a common and internationally accepted practice. In the UK these are most often applied in the interests of 'equity' with the HM Treasury providing 'guideline' weights for use in public programme evaluation. The HM Treasury recommended weights⁶¹ are all 'distributional,' i.e. linked to levels of household income. The lower the household income of a policy 'recipient,' the higher the weight given – so, for example, a programme aimed at providing, say, child care assistance to low income families would have a higher weighting and be therefore deemed (all other things equal) as generating greater social value than a similar one providing child care assistance to higher income families.

11.18 When we consider the development of the relevant sets of social weights for use in higher education evaluation, we return to similar questions as those raised in discussion about the generation of 'public value.' The question: 'What are society's desired outcomes?' poses much the same issues as the question 'What does the public value?'

11.19 This is always going to be a difficult question and the answers will change over time and space, and may be culturally specific. Some of the things that our society values highly today (for instance equal opportunities or political awareness) were not always as highly valued in the past. In the discussions of public value Kelly et al (2002) flag that in a democratic society the elected government is acting for society and its interests and the particular government policies in place are in large part a reflection of 'what the public (or society) wants.'

11.20 It is worth highlighting that in the discussions of public value, Kelly et al (2002) and Mulgan (2011) also suggested that a socially weighted economic valuation (i.e. the same type of process as that in a SMEV) is likely to be the closest approximation that could be achieved for the assessment of public value generation.

11.21 Additionally, it is worth pointing out that a considerable virtue of a SMEV is that it is transparent. The economic valuation is the outcome of an objective and rigorous analysis based on fundamental theory. The social valuation is *de facto* being *inferred* and social weights could change in line with changing social or political priorities. Yet by 'pegging' social value in reference to economic value by applying social weights, it is clear and transparent where the 'trade-offs' are being made. To the extent that different social groups believe a government (social) policy is not a good one they lobby to change it and hence to change the 'weights' given. In section 12 we discuss the practical application of social weights in more detail.

12 The feasibility of undertaking a SMEV for higher education – challenges and issues.

12.1 This section examines some of the practical issues and challenges involved in applying SMEV to UK higher education. The development of the SMEV approach by the current authors involved a number of pilot studies – one of a single university and subsequently one exploring the valuation of a subset of university outputs across a number of universities.⁶² The key challenges and issues identified in the course of the pilots relate to:

- Data availability in the identification and quantification of outputs
- Finding the 'economic' prices for higher education outputs

These issues are discussed below.

- There is the further issue of how to select the relative social weights, which is discussed in section 12.

12.2 Identification and quantification of outputs:

- 12.2.1 The first steps in the SMEV process are to identify and then quantify all of the higher education institutional outputs. What does a university produce or deliver? What do universities actually do? This is not actually as simple as it sounds. Many universities (in particular the older 'pre-1992' Universities) have a highly devolved management structure which can permit considerable latitude and freedom of action at departmental level and at the level of the individual staff member – especially academic staff member.
- 12.2.2 This means that, as well as undertaking the more obvious tasks of 'delivering teaching' and 'undertaking research', university staff are frequently engaged in very many other activities of their own choosing and at their own direction⁶³ – and not all of these activities are recorded centrally. For example, many university staff act as specialist advisors to public agencies and government departments. Others are actively engaged in community and cultural activities, working with schools, youth groups, orchestras, theatres, hospitals. Others belong to professional and business networks, organise seminars, and promote academic conferences (Many City Tourist Boards have begun to recognise that harnessing the efforts of university staff can be a boon for local business tourism, as universities can attract high spending business visitors to an area.) Recent research undertaken by the University of Cambridge – which included the first ever survey of all UK academics⁶⁴ – has demonstrated that academics of all disciplines are involved in very many 'external' activities, with business, public and third sector organisations.
- 12.2.3 The first SMEV development pilot study of a single institution (the University of Strathclyde) tackled the issue of identification and quantification to assess the feasibility of the task. The initial pilot study succeeded in identifying over 220 separate outputs which were grouped, for pragmatic purposes, according to the headings:
- Teaching
 - Research
 - Consultancy/advisory work
 - Cultural Outreach
 - Community Outreach
 - Other
- 12.2.4 Many of these outputs could be subsequently 'aggregated' according to their basic shared characteristics (e.g. the delivery of a first year course in French may be sufficiently similar for these evaluation purposes to that of a first year course in German)⁶⁵ or regrouped into other headings (such as 'knowledge exchange').
- 12.2.5 From this study and also from lessons learned in the subsequent pilot study (which involved 8 different institutions) we concluded that, in principle, all Higher Education Institutional outputs can be identified. The pilots also determined that it was possible to find a suitable volume measure for each output and suggest the type of data that could be used and from where it could potentially be sourced.
- 12.2.6 It was clear from the development studies that some outputs (for example the days spent by university staff on 'public service') were not routinely collated centrally in all institutions as there was no perceived purpose in doing so. In some cases such outputs were reported for purposes of staff appraisal – and also sometimes for other purposes (where they might be regarded as an 'indicator of esteem' in research and related assessments). However the surveyed institutions also agreed that if there was sufficient reason for the relevant data to be collected centrally, it was certainly possible.⁶⁶
- 12.2.7 The development of a comprehensive SMEV framework for UK higher education therefore needs an agreed UK-wide 'master list' of university outputs by type and also the specification of an appropriate natural volume unit for each type of output. It then requires institutions to collaborate in the generation and return of the data. (See figure 10 below for illustrative examples of data types and volume measures.)

12.2.8 While this may initially appear to be a resource intensive data collection exercise, it may not need to be as difficult as it first appears. Universities already generate and collect significant quantities of data for many different purposes and some of the relevant output data needed are *already* collected by HESA (e.g. through the HE-BCIS) or by other agencies for other purposes. A number of universities have also begun collecting data on their staff 'knowledge exchange' activities for internal purposes or to use for institutional publicity. Ideally the SMEV should use, as far as possible, the data that are already collected for other purposes. This aim would be consistent with the ongoing moves within the sector and by sectoral agencies such as HESA to rationalise data collection and to minimise the burden on institutions.

12.3 Pricing of higher education outputs:

12.3.1 The third step in a SMEV is to undertake the pricing of the identified outputs. A 'set' of economic prices⁶⁷ for all of the outputs is required. This has to be an exercise undertaken by independent analysis (i.e. cannot be done by the institutions themselves) as the prices to be used are not necessarily related to the money an institution receives for a particular service and need to be a set of consistent, economically robust, 'UK-wide' or 'society wide' prices so that they are valid for all institutions.

12.3.2 We have previously highlighted the difference between financial value, and economic value. In summary, financial value is related to the financial amount involved in a transaction (money changing hands, tuition fees or contract research fees, for example) but economic value (particularly for non-market goods and services) does not have to be related to money per se but rather to the use of resources of one kind or another.

12.3.3 So when pricing university outputs it is the 'economic' value we are seeking, rather than the financial value. This means that all outputs including 'non-market outputs (for example an open public lecture for which there is no entry fee and hence no financial value attached) must be priced. It is entirely feasible to place a value on all of the outputs, including non-market or non-commercial work.

12.3.4 In some cases the financial value might be the same as the economic value. This is always the case where the financial price is one that has been set through the operation of an open or 'free' market. An example would be a piece of contract research where the commissioning client and the university have freely entered into a contract and mutually agreed what both regard as a 'fair price.'

12.3.5 However where there is no financial price attached (such as an open public lecture) there are a range of recognised economic techniques that can be used to deduce a price. This is through a process known as 'shadow-pricing' and includes a battery of methods such as (to mention a few):

- 'revealed preference' (observing what people are willing to pay elsewhere for a similar service),
- 'stated preference' or 'willingness to pay' (which involves asking people what they would be willing to pay for the service if they had to pay) or
- 'Time Cost' (related to the amount of time people are willing to spend.) Time-cost is a method most commonly used by government in economic appraisals of transport projects (the amount of time spent or saved in travelling is an important element of the value of a transport project.) Detailed guidance is available on the standard 'rates' to use for valuing time – with a different value for 1 hour of leisure time and 1 hour of business time.⁶⁸

12.4 The pricing and valuation process is shown in Figure 9 and examples of output identification and pricing shown in Figure 10.

Figure 9: Pricing of university outputs

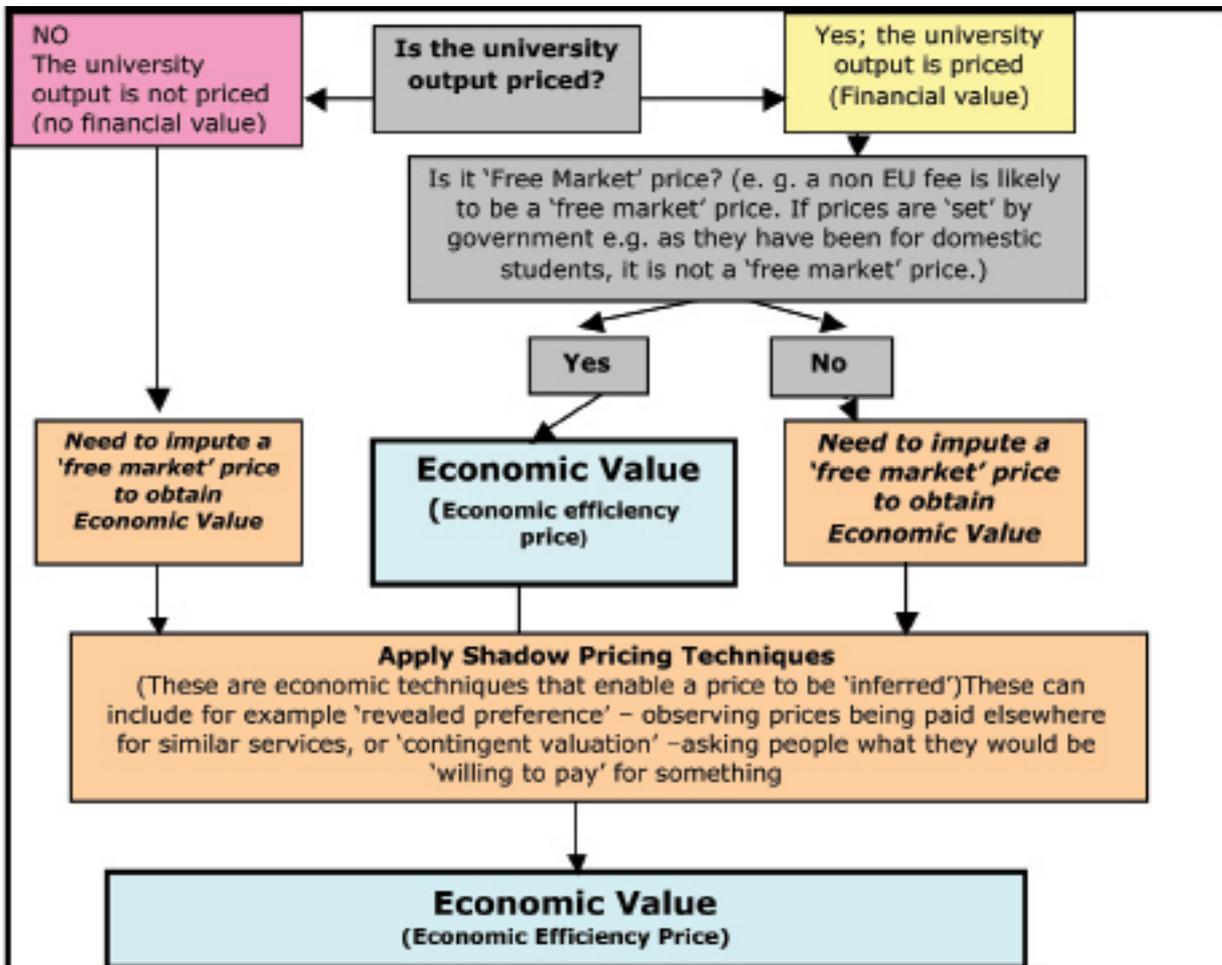


Figure 10: Output identification, quantification and pricing (examples)

	Output Measure in Natural units	Is it priced?	Is it a Market Price?	Is there a Possible Free Market comparison?	Economic Value
Teaching: Undergraduate BSc Chemistry	No. of registered FTE students	Yes	Non EU rate yes, domestic & EU rate no	Use Non-EU rate across the board	=No. of registered Fte students x Non-EU rate fee
Research: Contract research projects for industry	Number of projects/length of projects	Yes	Yes	-	=Actual financial value of contract
Editing Books	Numbers edited	No	No	Possibly commercial editing/NUJ recommended rates	Hours at commercial editing rates
Other KE: Advisory work for government (e.g. serving on government committees)	Person days delivered	Usually not	Usually not	Per diem consultancy rate for equivalently qualified personnel	=No. of person days delivered x equivalent per diem consultancy rate
Community KE/Public engagement Open Public Lectures	Number of attendees/ length of attendance	No	No	No parallel market use other techniques e.g. time cost (use government valuation rates for leisure and business time)	=Value of the time spent by attendees
Legal Advice Clinic	Number of hours advice delivered	No	No	Equivalent market (hourly) rate for equivalent level of expertise	= Hours delivered x market rate for expert time
Room & Facilities Hire	Number of bookings	Yes	Usually-commercial rates set but some discounts offered to local charities	Actual Full Price (commercial rate used)	Commercial full price rate x all bookings
IT Network services for incubator unit companies	Number/ length of contracts	Yes	No (not intended as commercial service)	Market equivalent price (e.g. ISP charges) for service provided	Market equivalent price x number of contracts.

12.5 By following through steps 1 and 2 of SMEV, developing and populating a 'master' list of outputs that is applicable to all HEIs, with volume measurement in agreed natural units, we would already have something entirely new for higher education in the UK-output, the basis for an index of university output.

12.6 By then moving to Step 3, using a set of economy wide- or society-wide. 'values' and 'prices' applied to each volume unit (with the same set to be applied to every university), the economic valuation produced by SMEV would be applicable at micro (institutional), mezzo (sectoral) and macro (economy-wide) levels.

12.7 The completion of all three steps would enable assessment of the individual institutional contribution to the economy:

1. The individual university contribution to economy = individual volume outputs x economy wide prices.

12.8 It would also enable assessment of the overall contribution of the university sector to the economy:

2. The contribution of the HEI sector to the economy = the aggregate of individual contributions calculated in (a)⁶⁹

13. Application of social weights to obtain the Social Modified Economic Valuation (SMEV)

13.1 This section explores how the application of social weights to the economic valuation could work. As we have highlighted, the application of social preference weights to an economic valuation is an internationally accepted practice. The UK Government currently applies weights that reflect their own policy preferences when assessing investment outcomes. The Treasury Green book gives examples of distributional weights based on household income; the lower the household income of a policy activity 'recipient' the higher the weight is given. As these are the 'official' weights in use by government, these weights would be relevant when seeking public funding and wishing to show 'social value generation' using the same methods and terms employed by government.

13.2 In Figure 11 we present a simple stylised example of how the application of social weights can modify an economic valuation to give a social valuation. This example shows the economic and social valuation (socially modified economic valuation) of an open public lecture.

13.3 The key facts about the (hypothetical) lecture are that:

- There was no entry fee (which is typical for many university open lectures).
- There were 80 attendees staying for one hour.
- The participants were from a range of backgrounds, but the lecture was explicitly aimed at attracting attendees from disadvantaged areas (and survey data on attendees was collected to ascertain their background/likely household income).

Figure 11: An example of application of social weights

Participant household income band	A Attendee hours	B Financial Value (There was no entrance fee, so no financial price) £	C Economic Value (Attendee hours x Time cost)* £	D Social Weights (from Green Book)	Modified Social Value (B x C)
Top Income Quintile	15	0	66.9	0.4 - 0.5	26.76-33.45
4th	20	0	89.2	0.7 - 0.8	62.44-71.36
3rd	10	0	44.6	1.0 - 1.1	44.6-49.06
2nd	20	0	89.2	1.4 - 1.5	124.88-133.8
Bottom	15	0	66.9	2.2 - 2.3	147.18-153.87
Total	80	0	356.8		405.86-441.54

*The hourly rate applied for the time cost was for 1 hour of leisure time at Department for Transport recommended rates which equated to £4.46 for 1 hour of leisure time (2002 prices).⁷⁰

13.4 In this example, there was no entrance fee, the University received no income and hence the Financial Value of the event was £zero. However by using shadow-pricing techniques (in this case the 'time-cost' method) the Economic Value is estimated at £356.80.

13.5 Social weights are taken from the UK Treasury Green Book. These relate to the household income band of attendees, with a higher weighting given to attendees from lower household income bands. Once the social weights are applied, the SMEV is seen to be higher than the economic value, coming in at between £405.86-£441.54. Therefore the public lecture could be said to have generated social value equivalent to between £405 and £442.

13.6 This does not mean that actual cash to this value was generated; what it does is enable the 'relative value' of different outputs to be compared within a single framework. It helps overcome the problems one would otherwise face when trying to compare two very different things (the value of teaching, say, with the value of public engagement (the 'comparing apples and pears' problem). The social value generated by the lecture could be compared with the social value generated by another activity measured within the same framework. This brings us back to the question of how to derive or decide on the social weights that should be applied to an output? This depends on the purpose of the evaluation and from whose perspective it is being examined. This is discussed below.

13.7 For Sector-wide analysis and for the purposes of seeking public funding (the sector including all UK HE, or all Welsh HE, NI HE or Scottish HE, as the case may be.) It would clearly not be appropriate for the universities themselves to decide what the sets of weights should be; this would be the sector talking to itself and appear somewhat self-justifying. Returning to the discussion about public value generation, one of the key elements was that of the concept of the 'trade-off'; observing the existence of public or society priorities not just through what people say they want but through whether or not they are willing to make sacrifices to get it (Examples being sacrificing personal income to pay taxes or by giving up personal freedoms in return for greater security). Ultimately if one is seeking public funding therefore the weights should be those that reflect the priorities of the funders (as they have to make trade-offs to provide the funding). The weights to be applied should therefore be determined by the policies of the relevant elected central or devolved government of the day - on the basis that in a democratic society an elected government is acting for and taking decisions on behalf of society.

13.8 As we have previously pointed out, weights determined by government policy are already used in public sector programme evaluations, with distributional weights to reflect social equity issues being recommended by the HM Treasury Greenbook. It must be emphasized that the outcome economic valuation would not change with government policies. Only the social preference weights could change. This would make the choices and trade-offs being made very clear.

13.9 For instance, some higher education outputs may have equal economic value but society feels that one is more desirable than the other and would like to support one more than another. An example is given in Figures 12 and 13.

Figure 12: Equivalent economic value example

Student A The estimated economic value of providing 1 year's Chemistry tuition to a student from a more affluent background (e.g. identified by domicile postcode) = £10k

Student B The estimated economic value of providing 1 year's Chemistry tuition to a student from a disadvantaged background (e.g. identified by domicile postcode) = £10k

13.10 In this example there is no difference in the economic value generated by teaching one type of student over another. However, if there is a social or policy preference for encouraging more students from poorer backgrounds to study chemistry, a social weight can be applied to increase the notional 'value' of the poorer student being taught. The result would be the Socially Modified Economic Value (SMEV) or the *social value generated*.

Figure 13: The Socially Modified Economic Value (SMEV)

Student A Economic value of providing 1 year's Chemistry tuition to a student from a more affluent background (e.g. identified by domicile postcode)= £10k

Student B Economic value of providing 1 year's Chemistry tuition to a student from a disadvantaged background (e.g. identified by domicile postcode)= £10k

Apply social weighting (e.g. 1.2) to the economic valuation for student B to obtain the 'socially modified economic valuation'

Socially Modified Economic Valuation (Social Value generated) of providing 1 years Chemistry tuition to Student A= $£10 \times 1 = £10K$

Socially Modified Economic Valuation (Social Value generated) of providing 1 years Chemistry tuition to Student B= $£10 \times 1.2 = £12K$

13.11 It must be remembered that this is not about financial value; it is not about actual money flows. It provides information to help decisions about resource allocation to meet policy objectives. In the simple case above, teaching Student B is regarded as generating greater social value than teaching Student A and additional public financial support for Student B could be justified accordingly. (This is a fairly realistic scenario, having already happened – universities have previously been given specific support to attract students from disadvantaged backgrounds.)

13.12 At individual institutional level and analysis for the purposes of internal planning, as discussed in section 11, the economic valuation results for the individual institution are produced according to the same process, principles and approach to pricing as for the sector as a whole. In a diverse system, the outcome economic value of activities may differ from institution to institution, depending on a range of factors including their portfolio of work and the demand for what they do. However there are particular benefits of a socially modified economic valuation framework at institutional level.

13.13 Firstly the SMEV will provide a university with a full economic valuation of its work (which will almost inevitably be considerably more than the financial valuation). This in itself can be useful and informative for institutions and their host communities.

13.14 Secondly, by using the same 'society-wide' social weights that are used at sectoral level for public funding, universities will be able to both:

1. Observe where their portfolio of activity sits within the hierarchy of social preference (i.e. how far what they do is in tune with overall desired societal outcomes),
2. Use these results when making cases for public funding.

13.15 But there is a further application of the SMEV process that may help institutions in both their own internal planning and when making cases to other (non-government) funders. As we have seen the economic valuation is a constant point of reference and for the purposes of public funding, institutions must use the relevant government weights; but the individual institution can *use other sets of social weights for other purposes*. The most obvious other purposes are:

- For internal university management and planning – to support alignment with the University's stated strategic goals and objectives
- For other external partnerships and assessment of value in presentation of cases to other donors and donors.

13.16 The diverse nature of the UK university system means that different universities operate in different segments of the market and are already seeking to differentiate themselves through specialisation of one kind or another. They are already making choices and 'trade-offs,' whether implicitly or explicitly, in their internal resource allocations. This can relate to being selective in what disciplines they operate, the types of students they wish to attract and the other types of business in which they wish to engage. However, the SMEV would provide a robust framework to inform internal decisions, making the 'trade-offs' more transparent and hence better inform institutional management.

13.17 A University with a mission focussed on the local community, for example, can devise its own weights that place a higher premium on community focussed activities. The results of these weights applied to the economic valuation could be used to inform its own planning and internal resource allocation process.

13.18 In working with other external partners and donors, the University can apply the donor's preference weights to the economic valuation and the results would help the donor see how far their investment in the university would generate the 'donor value' that they want.

13.19 To summarise, the measurement of economic value remains constant, but the measurement of social and public value created can change to reflect different social preferences. But the creation of social and public value is being 'grounded' within a methodologically rigorous and holistic economic analysis – and the choices being made and the 'trade-offs' are clear. This gives the robust theoretical underpinning needed for sectoral social value generation to be taken seriously at a policy level, as well as providing the fine 'grainedness' and flexibility necessary for individual institutional analysis.

Conclusions

As we have seen, the current evidence base for university impact and value remains fragmented and piecemeal. There is a substantial body of material, but material which is disparate, looks at different aspects of higher education from different perspectives and for different purposes. There is also a considerable quantity of data collected about universities, by many different agencies, by HESA, SCONUL⁷¹, UCISA⁷² and others; there are numerous process driven and quality evaluations (QAA, the enhancement led institutional review, the research assessment exercise and now the research excellence framework, the national student satisfaction survey, etc.), and there have been many repeated reviews, invention and reinvention of strategies for higher education. Yet despite the considerable resources being devoted to all of these we remain unable to take a holistic view of the work of higher education institutions or assess their overall value to society in a robust and methodologically sound way.

One cannot help but reflect that higher education also suffers from a similar difficulty as the cultural sector relating to:

"...the overproduction of data which is not directly used in policymaking and lacks robustness when compared to other forms of evidence gathered for use in other areas of policy..."

O'Brien, 2010

This is not a situation that bodes well for the higher education sector. With a rapidly changing policy context across the UK, Universities will find themselves increasingly called on to show how they generate value, directly or indirectly, for the people who pay for them. This will include students and their families, charities and philanthropic donors and sponsors as well as the general tax-payer.

It is also a matter of importance for society at large – as if we do not have any real sense of how and where universities generate value for society there is a danger that society under-appreciates and under-invests in higher education, to all our detriment.

The shift in teaching funding policy in England following the Browne Review and the UK Government White Paper has sent shockwaves around the system and is perhaps a wake-up call to institutions that there needs to be a much more concerted effort to explore and discuss the value of higher education to society.

One of the conclusions from the original breakfast round table discussion was that a convincing bridge needs to be built between a 'narrative of value' and a hard quantitative valuation framework. Narrative alone will not do (and has clearly not worked in the past, there are countless glossy brochures full of 'good news stories' about higher education) but neither do numbers alone 'catch the imagination' or give insight into the richness and diversity of higher education.

We would propose that taking forward a SMEV approach within the context and language of 'public value generation' would be a major step forward for the higher education sector. Framing issues of value within robust and rigorous frameworks that are used by government and recognised internationally will provide higher education with the language, evidence and tools to help position itself for the future.

The process of identification and quantification of HEI outputs (developing an index of university output) would in itself be a significant advance in the current state of knowledge about higher education institutions.

The main questions surrounding the feasibility of a SMEV approach are likely to be in relation to the availability of data required and the efforts involved in its collection. We would argue that Universities already collect most of the data required to enable such an analysis, although not all of it is currently in the format required.

The SMEV needs to be piloted and tested further. The next three most helpful steps would be to:

1. Undertake a study of current data availability and how far SMEV could proceed with extant data
2. Develop a master list of outputs, and
3. Undertake some preliminary work on developing a set of economic prices.

These three steps are explained in more detail in Appendix 6.

Further work also needs to be conducted to frame the public value narrative and to debate the ways in which public value and 'social preference choices' are determined. This is where good case studies could provide depth and interest. It is worth noting that the cultural sector is already moving in this direction of

marrying their narrative with formal quantitative analysis.

"Narratives of cultural value help us to understand the meaning behind economic value and thus are an essential part of any decision over resource allocation. However they offer little in the way of commensurable data for a cost-benefit analysis and so are problematic for decision-makers seeking to do policy appraisal and evaluation within the framework of the Green Book."

O'Brien 2010

Higher Education in the UK is facing into a difficult and challenging future. Decisions are being made about higher education, its role and future funding, which have far-reaching consequences; at an institutional level there may be mergers and closures of institutions, teaching and research in some academic disciplines may be considerably contracted. Individual citizens will be paying more directly for higher education and it remains to be seen how this will affect their choices about higher education. There may be other serious knock-on consequences of the radical divergence in higher education funding policy across the regions of the UK.

The current patchwork of evidence on which all of these decisions are being made is really not enough. A holistic approach to assessment of the value of what universities do and their wider impact on society is badly needed. This is an issue for both individual institutions and for Higher Education Funders across the UK. Sectoral and pan-UK agreement would enable an agreed holistic approach such as SMEV to be trialled and tested. It is vital that individual institutions collaborate in the venture but there needs to be overarching agency support for implementation with sufficient breadth and depth to deliver meaningful results.

The original purpose of this report was to explore the issues surrounding social and economic valuation of universities in the UK. An underlying question had been 'why do universities seem unable to make a convincing case for broader social rather than purely financial value?' We hope that this report has shed some light on this issue, in particular highlighting the current lack of sufficiently robust and holistic analysis that takes in all aspects of university work. We have also presented a potential way forward through the development of socially modified economic valuation within a public value generation framework and propose that this approach would be really worth trialling across the sector; its implementation could significantly improve the policy evidence base.

Appendix 1: Evidence matrix

Figure 11: An example of application of social weights

Colour code: Knowledge Exchange Teaching Research All or elements of ALL Other

Breadth of Coverage and Focus	Focus: Wider Impact – Society Wide, Economy Wide (Macro)	Sector Level , industry sectors/segments (Mezzo)	Individual organisation or business level (Micro)
Types of Evidence			
Qualitative			
Statements of policy or plans			Pathways to Impact (Both R & KE) HE-BCIS RCUK Impacts Series (e.g. Impacts: People and Skills etc.) All University strategic plans...
Case Study related (Examples of work undertaken)			REF, Pathways to Impact (Both R & KE) Various RCUK Reports (e.g. Big Ideas for the Future 2011) Degrees of Value (nef 2011) (using SROI) Service to Society: Demonstrating the Public Benefits of HE (HEFCE 2010)
Framework based (e.g. Balanced scorecard, Benchmarking)			Regional contribution and other benchmarking tools e.g. PASCAL , REAP (Bradford), IMHE, Universities that Count
Quantitative			
Audit/survey		HE-BCIS Cambridge Survey of Academics (Kitson et al) HESA data (finance, staffing & students) SCONUL data (on library activities) UCISA data (On IT usage and capacity)	HE-BCIS HESA data (finance, staffing and students) SCONUL data (on library activities) UCISA data (On IT usage and capacity)
Modelled analysis (economic or statistical)	Rates of Return literature Graduates and Productivity Analysis (e.g. Harris) Graduate Destinations Analysis (e.g. Faggian, McCann, Communion) Innovation linkage and Innovation System research CGE Modelling (McGregor et al) McMahon Extended Human Capital approach <i>Higher Learning Greater Good</i> JISC Research on economic impact of Open Access	Innovation linkages (Simpson, Howells, Huggins) Economic Expenditure Impact Studies (e.g. Impact of higher education on UK economy) Universities UK Economic Impact Model CGE Modelling (McGregor et al) (potentially) Kelly/McNicoll Towards estimating the economic value	Economic Expenditure Impact Studies (Individual Institutions e.g. Brighton, Sussex, Strathclyde, Hull, Northampton etc) Universities UK economic impact model Degrees of Value (nef 2011 using SROI) Kelly McNicoll Towards estimating the economic value
Mixed Mode			
(e.g. Audit plus framework, Audit plus Statement of policy, Case studies plus quantitative evidence)		HE-BCIS Russell Group Community Engagement Model	HE-BCIS, Degrees of Value (nef 2011 using SROI) Russell Group Community Engagement Model, Cambridge community, University of Brighton Research for our Future (RCUK) Knowledge Exchange and the Generation of Civic and Community Impacts (PACEC 2010)

Appendix 2: Measuring the social value of universities: Discussion paper

Executive summary

Parts 1 aThis paper has been prepared as a background discussion paper for the joint National Coordinating Centre for Public Engagement (NCCPE) and Universities UK (UUK) round table breakfast discussion on 15th June 2011 as part of *Universities Week*. The round table breakfast discussion is focussed on the role of universities in society and how a case may be made for the social and public value of the UK higher education sector.

The paper highlights some of the issues involved in making a case for universities' social and public value. It draws on an ongoing study being undertaken for the NCCPE which is reviewing extant approaches to measuring social and public value from higher education as well as methods being used in other sectors. A fuller narrative is included as an appendix.

Measuring the social value and wider benefits of higher education – why now?

In a time where university funding is being reduced, or re-configured, there is serious risk that the activities generating wider social benefits are cut back because there is inadequate evidence to make the case for their continuation;

Longer term, such a re-focusing of effort could damage public support for investment in the sector (whether this comes from philanthropic giving, students, graduates as alumni, businesses or the government);

Without better insight into the value generated by universities' societal engagement, we miss an important opportunity to achieve more with the limited resources at our disposal.

Consequently within the HE sector there is an urgent need to explain or highlight the importance of less commercial or less business-oriented university work which contributes to the overall social value generated by universities.

What do we mean by social or public value?

There are a range of different interpretations of the meaning of social value or public value. In an economic sense all value (financial and non financial) generated by universities has social value, as members of society benefit. But in relation to universities it is most often taken to mean value being generated by non-market activities, in other words the value that is not captured within financial measures such as income or revenue generated. In general, social or public value is related to the broader 'worth' of an activity to society. This is distinct from social 'values', which are the moral, political or philosophical beliefs of a society.

How can we ensure that the debate is purposeful?

There are three main reasons for exploring how to assess social value and social benefits generated by higher education, which are inter-related: firstly, to support accountability and to justify the use of public resources; secondly, to improve the internal university management of those resources and alignment with individual university missions; and thirdly, to improve engagement and dialogue with those outside the university – to better explain and communicate what universities are doing and why, and to invite external feedback.

What role do universities play in society? How is their activity captured through formal funding and reporting mechanisms?

Universities engage with a range of stakeholders, including the general public, civil society, public sector, business and policy sectors. Their interactions are widely understood to occur in three broad arenas:

- Research and knowledge exchange:
Generating benefits to society and the economy through the processes of research, knowledge exchange and public engagement
- Teaching and learning:
Contributing to economic growth and enriching society by developing knowledgeable, skilled, well-rounded graduates
- Wider societal engagement:
Generating wider social impacts through the various engagements – voluntary, legislated for and accidental – which universities create simply by being important societal institutions in their own right

Although the new Research Excellence framework and the Research Councils 'Pathways to Impact' recognise the wider social benefits generated through research, there is no sector wide mechanism to quantify the non-market value of universities' wider engagements with society. In particular, the wider benefits generated through the education of graduates is difficult to capture, and though many of the wider societal engagements conducted by universities are evaluated the full impact of these activities is not captured in any systematic way. The best we can offer is a patchwork of case study and narrative accounts.

Can we move beyond 'narrative' to develop a holistic measurement framework for the wider benefits of Higher Education?

Attempts are underway, supported by UUK and the NCCPE, to put a market value on the outputs and outcomes of the sector, and these will be discussed at the roundtable. Attempts to do just this in the USA have led to the estimation that the non-market benefits of universities are greater than the financial ones. Such evidence could provide compelling evidence to inform future policy in the UK:

'the estimate that social benefit externalities constitute about 52% of the total benefits of HE is an approximate guide to how far the privatization of HE should proceed before public investment falls below the level conducive to optimum efficiency' **McMahon 2009**

Discussion points

In your view, is the current balance between universities' 'market' and 'non-market' activities about right? How well do you think the sector currently 'makes the case' for the social value it helps to create?

How do you assess the likely impact of new funding arrangements for research (the 'impact' agenda) and for teaching (the raising of student fees). How might these affect the balance struck between 'private' and 'public' good?

How important do you think it is that the sector seeks to develop a means of quantifying in a holistic way the value of non-market benefits? Are there dangers in quantifying social value in monetary terms?

Who should be involved in ongoing negotiations over the future 'balance' of university activities? How can the views of these different stakeholders best be heard?

In discussing 'value', how far do we also need to debate and take account of 'values'?

How can we ensure that spending time and energy better articulating the social value of universities actually leads to tangible benefits to wider society – and doesn't become an exercise in navel gazing?

Measuring the social value and wider benefits of higher education – why now?

UK Universities are facing challenging times. The UK Higher Education Sector has grown substantially over the last 15 -20 years, largely through public funding support. Since the time of the Dearing Inquiry into Higher Education there has been a 39% increase in university student numbers, from 1.79 million students in 1997 to 2.49 million students in 2010.⁷³

Increased public financial support has inevitably led to increased demand for accountability, for evidence that society is receiving a return on its investment in universities and questioning whether universities are really delivering what society wants. More recently, following the Browne Review, changes to funding arrangements and significantly increased student fees have raised profound questions about how the sector can continue to balance its contribution to wider society, with pressure to generate private benefits for its students.

There are encouraging signs that the wider benefits that universities generate are valued. Recent funding policy has led to a range of funding schemes that have encouraged a holistic approach to generating social and financial outcomes.⁷⁴ significant insight into how public and community needs and perspectives can be woven into university practice.⁷⁵ Research by Michael Kitson et al – in the largest ever survey of UK academics – has revealed that most academics – far from existing in an ivory tower, or dealing exclusively with commercial partners – cultivate a rich network of cultural, community, public sector and commercial contacts.⁷⁶

Despite this, debate about the role of universities in society is often characterised by misunderstanding, simplifications and/or an absence of evidence. It has often tended to be limited to arguments about the market or 'close to market' activities of higher education institutions; with a particular emphasis on research and teaching that has a direct relevance to business and industry. Government – the Treasury in particular – expect that if something is valuable enough to receive public funding, the outcomes should be described and measured, and the HE sector (like many others) has struggled to articulate the social benefits it generates. Many in the university sector resent external attempts to influence the focus of teaching and research to meet political ends, and have characterised the 'impact' agenda as a crude attempt to force industrial liaison and short term financial imperatives on to the sector, and have not always recognised the opportunity it offers to articulate the wider benefits they generate. And the wider public themselves often seem under-whelmed or ill informed about what universities contribute. Research by UUK for Universities Week in 2010 revealed that less than one-in-five people recognise the wider impacts universities have on society.⁷⁷

All of the above pose significant threats to the sector:

- In a time where university funding is being reduced, or re-configured, there is serious risk that the activities generating these wider social benefits are cut back because there is inadequate evidence to make the case for their continuation;
- Longer term, such a re-focusing of effort could damage public support for investment in the sector (whether this comes from philanthropic giving, students, graduates as alumni, businesses or the government);
- Without better insight into the value generated by universities' societal engagement, we miss an important opportunity to achieve more with the limited resources at our disposal.

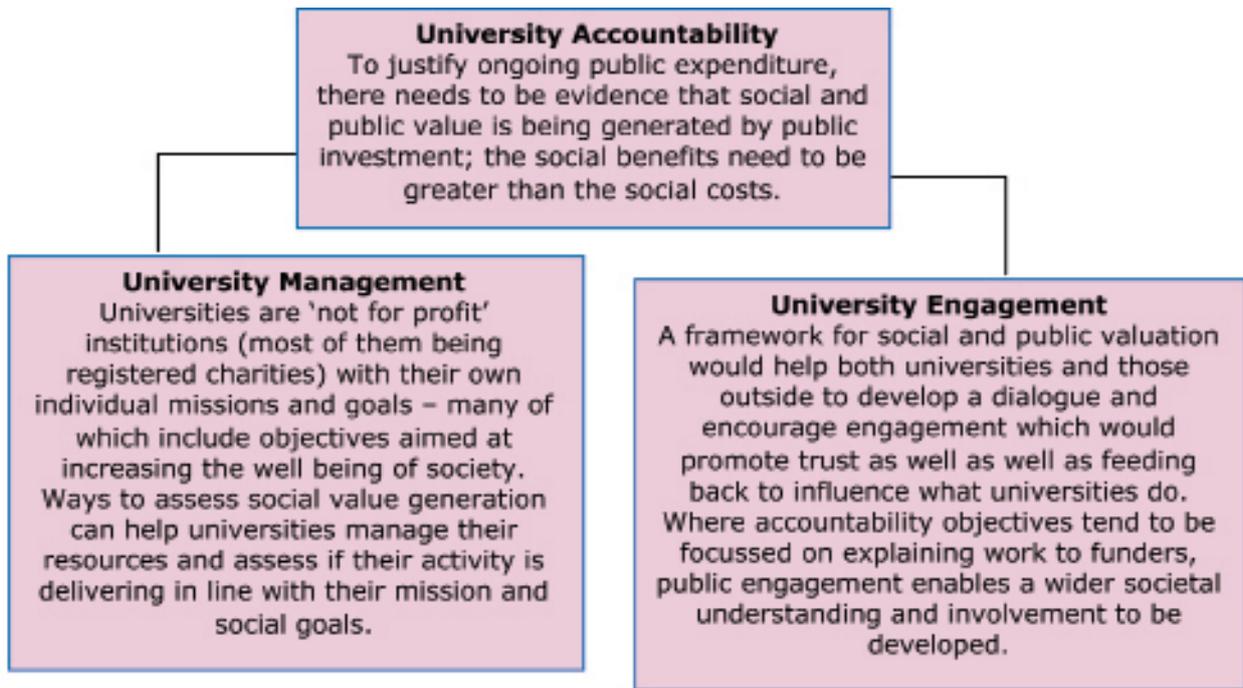
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There are three main reasons for exploring how to assess social value and social benefits generated by higher education, which are inter-related: firstly, to support accountability and to justify the use of public resources; secondly, to improve the internal university management of those resources and alignment with individual university missions; and thirdly, to improve engagement and dialogue with those outside the university – to better explain and communicate what universities are doing and why, and to invite external feedback.



Key economic reason for valuation

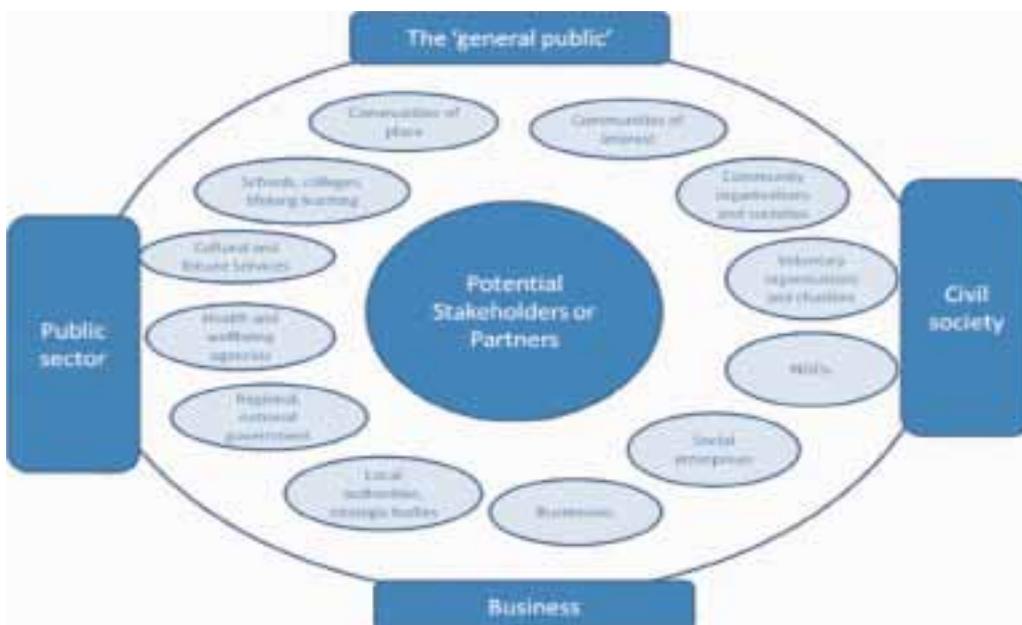
There is a further key economic reason (from society's perspective) for undertaking assessment of social value and the non-market benefits of higher education. This reason is that if investment decisions about higher education are made entirely on calculations of financial values and market returns, there may be underinvestment in higher education both by society and by the individual.

What role do universities play in society? How is their activity captured through formal funding and reporting mechanisms?

In considering the role of universities in society, it is helpful to 'map' the different stakeholders with whom universities interact. This diagram offers a simplified representation:

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To what extent are these interactions captured in current funding and reporting mechanisms? How well placed are we to describe the difference universities are making in these different arenas, with these different stakeholders?

Research and knowledge exchange

Through 'Pathways to Impact'⁷⁸ and the new Research Excellence Framework researchers are now expected to account for the 'impact' of their research in arenas outside academia. This is a major policy shift. An 'outcomes framework' has been developed for the allocation of research funding, which recognises and rewards effective engagement with wider society linked to specific research outputs. These outcomes cover a broad range of benefits – from the financial to the social:

"Through the REF, the UK funding bodies aim to develop and sustain a dynamic and internationally competitive research sector that makes a major contribution to economic prosperity, national wellbeing and the expansion and dissemination of knowledge." <http://www.hefce.ac.uk/research/ref/>

'Impact' categories in the Research Excellence Framework

- Attracting R&D investment from global business
- Better informed public policy-making or improved public services
- Delivering highly skilled people:
- Creating new businesses, improving performance, or commercialising new products or processes
- Improved patient care or health outcomes
- Improved social welfare, social cohesion or national security
- Cultural enrichment, including improved public engagement with science and research
- Other quality of life benefits

The annual Higher Education Business and Community Interaction Survey,⁷⁹ which is used to inform allocations through the Higher Education Innovation Fund and the wider strategic direction of third stream activity, also recognises interactions with external stakeholders, though it emphasises business interactions. It captures income (from all sources, not just business) and outputs (including patents, spin offs, CPD and public events).

Teaching and learning

One of the most profound ways in which universities enrich society is through the education of students. Whereas a framework for describing the social outcomes of research is beginning to be developed, there is no equivalent framework for describing the contribution graduates make. With attention likely to shift increasingly to the 'private' benefits to individuals (in return for their increased contribution towards the cost of their education) there is a risk that the curriculum increasingly focuses on direct financial benefits

to individuals (thorough increased employability for instance) at the expense of a broader-based set of outcomes (e.g. encouraging civic participation).

Ground breaking work to quantify these outcomes has been undertaken in the US by the economist Walter McMahon.

The McMahon extended Human Capital approach

Human capital theory regards higher education as increasing the productivity of workers. Additional productivity is measured through the 'graduate premium' i.e. the net difference in earnings between a graduate and a comparable non-graduate. It does not include any non financial or non market benefits (either private or social) that may arise. Walter McMahon in his 2009 book *Higher Learning, Greater Good: The Private and Social benefits of Higher Education* proposes extending human capital analysis to capture all of the benefits generated by higher education, including indirect effects such as graduates being more likely to be active citizens and play a role in civic society. He also includes inter-generational effects such as graduates positively influencing the health of others e.g. of their children. Many of the non-market benefits are private benefits (enjoyed mainly by the individual and their family rather than by the rest of society) but there are also significant non-market benefits to the rest of society. He has developed an empirical framework within which benefits can be estimated.

In the UK some experimental work has been undertaken by Hermannsson et al to incorporate McMahon's approach to estimating benefits within an economic modelling system for higher education. A modelled analysis for Scotland looking ahead to 2050 projects an increase in GDP of 4.2% (baseline scenario) attributable to the higher productivity of a graduate workforce. When the aggregate social benefits are taken into account the impact on GDP increases to between 6.2 - 9.0% (depending on the assumptions). In other words, these results suggest that the impact of non-market benefits to society generated by degree education is potentially greater than the market benefits.

Wider societal engagement

Although the research 'impact' developments provides a way of accounting for those outcomes which are directly attributable to specific research outputs, a significant amount of universities' wider social engagements currently find no formal expression through assessment and reporting mechanisms, although many are informally evaluated.

Examples of such engagements include the huge contribution made by student volunteers (for instance mentoring or developing community-based research projects); the voluntary activities of university staff (for instance acting as trustees to charities, or giving public lectures and festival appearances); the opening up of university facilities to local communities etc.

Student volunteering: Bursting the Bubble⁸⁰

In one of the largest studies of student volunteering in England to date (involving over 8,000 students and graduates across six universities in England) v-funded NCCPE research in 2010 threw new light on the extent and impact of student volunteering:

- 63% of current students report taking part in formal volunteering since starting university, with over half of volunteers doing so both during term-time and in vacations and a third volunteering at least once a week;
- 95% of students who volunteer are motivated by a desire to improve things or help people;
- Over a third (38%) of student volunteers started volunteering for the first time at university;
- Two thirds (67%) of volunteers believed volunteering whilst at university had increased their willingness to volunteer in the future;
- Volunteer-involving organisations place great value on higher education students

The NCCPE has also commissioned a literature review of current approaches to evaluating and auditing these wider societal engagements. It identified seven key areas where such activities clustered, and for which measurement tools have been developed. This framework indicates the rich diversity of activities currently being undertaken in the sector.

Auditing, Benchmarking and Evaluating Public Engagement⁸¹

Dimension of public engagement	Examples of engagement
<p>1 Public access to facilities <i>Includes: Commercial and non-commercial use; Restricted and unrestricted access</i></p>	<ul style="list-style-type: none"> • Access to university libraries • Access to university buildings and physical facilities e.g. for conferences, meetings, events, accommodation, gardens etc • Shared facilities e.g. museums, art galleries • Public access to sports facilities
<p>2 Public access to knowledge <i>Universities' capacity for creating and transmitting knowledge makes public access to this a central strand of public engagement</i></p>	<ul style="list-style-type: none"> • Access to established university curricula • Public engagement events eg science fairs; science shops • Publicly accessible database of university expertise
<p>3 Student engagement <i>Releasing student capacity for community (and student) benefit</i></p>	<ul style="list-style-type: none"> • Student volunteering • Experiential learning e.g. practice placements, collaborative research projects • Curricular engagement • Student-led activities e. g. arts, environment
<p>4 Faculty engagement <i>Overlaps with dimension 2, but emphasis here is on individual staff involvement</i></p>	<ul style="list-style-type: none"> • Research centres draw on community advisers for support and direction • Volunteering outside working hours e.g. on trustee boards of local charities • Research helpdesk/advisory boards • Public lectures
<p>5 Widening participation <i>Equalities and diversity agenda</i></p>	<ul style="list-style-type: none"> • Improving recruitment and success rate of students from non-traditional backgrounds through innovative initiatives e.g. access courses, financial assistance, peer mentoring
<p>6 Encouraging economic regeneration and enterprise <i>Already a number of research projects focussing on measuring this. Some captured through HEBCIS</i></p>	<ul style="list-style-type: none"> • Research collaboration and technology transfer • Meeting regional skills needs and supporting SMEs • Initiatives to expand innovation and design e.g. bringing together staff, students and community members to design, develop and test assistive technology for people with disabilities
<p>7 Institutional relationship and partnership building <i>How the institution operates and organises itself to meet public engagement objectives through corporate level activities.</i></p>	<ul style="list-style-type: none"> • Collaborative community-based research programmes responsive to community-identified needs • Community-university networks for learning, dissemination, or knowledge exchange • Community members on board of governance of university • Public ceremonies, awards, competitions and events • Website with community pages • Helpdesk facility • Corporate social responsibility

Can we move beyond 'narrative' and case studies to develop a holistic measurement framework for Higher Education?

There have been many illustrative case study exemplars of where university work has had a wider impact beyond the financial. The Research Excellence Framework will rely on peer review of submitted case studies too.

However, while good case studies can give a flavour of activities and help 'tell the story', a hard case for investment tends to need some kind of quantitative element. There have been numerous attempts to develop such measures in other sectors. While not an exact science, being able to provide some kind of robust estimate of the financial value of non-market outcomes can provide valuable evidence in forming longer term policy and investment decisions. Might such an approach be feasible within HE?

Calculating the 'hidden' value of nature

A telling recent example is the report published by DEFRA earlier in June 2011,⁸² which attempted to put a figure on the value of nature to the British economy. The UK National Ecosystem Assessment attempts to define some of the billions of pounds worth of 'free services' provided by nature that are disguised within the economy each year, for example, as a component of property prices, patterns or tourism or crop production. Bees and other pollinators are calculated to be worth £430m a year to British agriculture. Living with a view over green space is given a value of £300 per person per year. Reckoned by the preparedness of the public to buy petrol to get there, the amenity value of green space near towns and cities is said to be worth tens of billions. The report argues that the value of these aspects of our environment are often undervalued because there is a tendency to focus on the market value of resources we can use and sell, such as timber, crops and fish.

These calculations can be used to spell out the 'real' costs of various policy options. The report shows that unfettered economic growth might produce a gain in the value of agricultural output of about 10%. But it would come at the expense of losses of recreational land and biodiversity, and the creation of extra greenhouse gas emissions. In addition, the encouragement of building on green belt and urban green space would see a £24bn annual loss in property values. It calculates that the total losses to the economy from unfettered growth would be £20bn a year.

The difficulty with capturing and assessing social value and wider HEI impact in any quantitative way is that it is often generated by HEI activities that are not priced in the market and so are not captured in measures of financial value, in monetary transactions and flows. *Financial value* is sometimes erroneously described as 'economic value' but *economic value* is about more than money flows, it is about all the resources used and generated, which is a much more complex and extensive picture. It can include non-market transactions. Recognition that higher education institutions generate non-market value and impact is key to finding quantitative ways to capture wider social value. The table below attempts to capture the measurement challenge:

Types of HEI Impact

	Private	Social
Market	E.g. Higher wages, higher employment rate (captured in the 'graduate premium'); patents and spin outs	E.g. Productivity spillovers from HEI R&D, productivity spillovers from graduates to non-graduates and other graduates
Non-market	E.g. Better health, improved longevity, improved child health, better educational achievements, happiness	E.g. Rule of law, human rights, political stability, democratization, civic society, lower crime rates

(Adapted from Lisenkova, 2010)⁸³

The limitations of financial value measurement for non-market work have led to a number of attempts to think of an alternative way to capture value. These have included the concept of 'public value creation' as part of a management and governance framework, Social Auditing, Social Return on Investment approaches (SROI) as well as ways to legitimately apply social weights to modify economic valuation, and experiments in extending human capital analysis. The latter, developed by Walter McMahon in the US, has led him to estimate that the overall social impact of the university sector is slightly greater than the financial impact (accounting for 52% of the total value generated):

'the estimate that social benefit externalities constitute about 52% of the total benefits of HE is an approximate guide to how far the privatization of HE should proceed before public investment falls below the level conducive to optimum efficiency' **McMahon 2009**

Valuing the outputs and outcomes of Higher Education

In arriving at any kind of quantification or university impacts, it is helpful to distinguish between 'outputs' and 'outcomes'. Outputs are the results of activities that can be clearly stated or measured. Outcomes describe the eventual benefits to society; that activities are intended to achieve (or those which are achieved, by serendipity or chance).

There is some limited agreement about what university outputs are – but very little attempt has been made to actually quantify the value of these. Without this intelligence it is difficult to make judgements about the costs and benefits across the full range of their activities. Such outputs range from journal articles, patents and lectures to hours spent mentoring or advising people outside the university. The NCCPE is currently working with Professor Iain McNicoll and Ursula Kelly to model how such intelligence could be gathered at both institution and sector-level.

This mapping of university outputs could provide a really productive 'neutral' ground: an accurate description of what universities do across the spectrum of research, teaching and engagement, and what the market value of such activity is. Such intelligence could help to explore and to negotiate the priorities for the sector, and to 'weight' the activities to reflect social goals and preferences.

Socially Modified Economic Valuation

Kelly & McNicoll's work builds on previous work undertaken for the Scottish Funding Council. They are undertaking a holistic economic valuation of all of the outputs of higher education institutions, including non-market outputs. The outcome economic valuation can be modified through the use of social weights that reflect social goals and preferences. This approach is based on fundamental economic principles and using definitions and techniques compatible with best international practice (World Bank, Eurostat, HM Treasury Greenbook etc).

The approach has already been piloted with a group of HEIs and the full NCCPE study report will show how it could be applied to the UK sector as a whole, as well as be used by individual institutions. At this stage it is sufficient to note the key elements to this approach:

- 1 To identify all the outputs produced by universities in every dimension of activity
- 2 To quantify the volume of each of these outputs in natural (i.e. non monetary) units
- 3 To identify economically appropriate prices to be applied to each unit volume of outputs (which may be the observed price or imputed through a process known as 'shadow-pricing'.) This derives the 'economic value' of the totality of HEI production.
- 4 To then apply appropriate social weights to the economic values to find the socially modified economic value of HEI outputs.

Outcomes attempt to describe the difference universities make. These might be financial – i.e. the amount of revenue generated. But they could equally be 'social' (e.g. measures of health gain, or improvements in social cohesion). They are challenging to measure, for a variety of reasons including:

- The number of factors usually involved, of which the universities contribution may only be a small part;
- How receptive both the external partners and the university are to collaborative working;
- The difficulty of finding measures that describe what can be quite intangible or very long term effects;
- The difficulty of quantifying these measures, or of aggregating them.

The solution is often to seek to capture outcomes through case study evidence. However methodologies have been generated to give a quantitative valuation to outcomes, including for instance Social Return on Investment.

Social Return on Investment (SROI)

SROI has developed from social accounting as well as cost-benefit analysis techniques. It is a framework that seeks to encompass all types of outcomes – social, economic and environmental – and involves stakeholders in determining which outcomes are relevant. It uses economic techniques to place a value on outcomes so that there can be a cost-benefit ratio estimated. It is increasingly being used by individual third sector organisations to justify public and charitable investment.

The New Economics Foundation has recently been commissioned by UUK to apply SROI methodology to examine aspects of social value generated by two case study universities (Warwick and Manchester Metropolitan), and to derive monetary values for three UK-wide societal outcomes: health, political interest and interpersonal trust. Their findings will be reported at the Roundtable event.

Enhancing and sharing the wider benefits of universities

Returning to the three 'pressure points' of accountability, management and engagement, there is clearly an ongoing challenge that the sector needs to address: how can it 'make the case' for the social value it generates, who does it need to engage in that negotiation, and – perhaps most importantly – how can it use this intelligence to make an even greater difference? Again, there are insights to be gleaned from other sectors, for instance from the work around 'public value' which informed the BBC's approach to its licence fee renewal in 2004. Public value in this context was interpreted as the BBC contribution to a range of areas such as encouraging civic society and 'national conversations' supporting knowledge and skills development, as well as building social cohesion, and showcasing British culture internationally. It focussed on using a range of illustrative measures to show how it generated public value based on concepts such as 'Reach' (e.g. audience coverage), 'Quality' (types of 'peer review'), Impact (audience numbers) and Value for Money (mainly cost efficiency ratios).

Creating Public Value

The use of private sector models in the public sector has generated an extensive academic literature. Amongst the most influential strands of research is the idea of 'public value', developed by Harvard Professor, Mark Moore.⁸⁴ The concept of public value is meant to serve as an alternative to customer-oriented models of government, which presume that public agencies can simply be re-modelled on the ideal of markets. It is a concept that presents management activities as crucial in negotiating the purposes of public sector activities, or their 'public value'. There are two aspects to the creation of public value: client satisfaction, and social outcomes.

The public value model is premised on the idea that there is no equivalent in the public sector of the one-to-one relationship with the customer, or of the intrinsic responsibility to create value for shareholders. While these organisational features have been interpreted by some strands of social science to justify the introduction of market-models that simulate private sector incentive regimes, Moore's concept of 'public value' places the emphasis on the role of effective management in generating and maintaining conversations with the multiple stakeholders in any public body over how to deliver services.

Tentative conclusions and discussion points

There are significant concerns currently that the planned changes to funding and policy in the wake of the Browne review will profoundly change the HE sector, and shift it away from 'public good' to a more marketing based model, where private benefit to students becomes a dominating feature. This could be taken to imply that government considers the private benefits of higher education (e.g. to the individual) capture the totality of the benefits to society (through the individual being a member of society). At the same time, politicians continue to seek to set targets or define outcomes that the sector should deliver against, but the views of other stakeholders are often absent from the debate, and many in the HE community apparently resent any external 'interference' in their work.

All of these developments make this discussion about the social value of the university sector particularly timely. The risk is that if public resource decisions for higher education are made on the basis of inadequate evidence – and insufficient understanding of the often invisible economic and social value being generated by higher education – society may not actually get what it really wants from higher education.

The UK HE sector has been very successful in highlighting its importance to the economy in financial terms. If the sector finds a way to explain and communicate its social and public value, there is an opportunity for a wider and more informed discussion with both government and the public at large as to what society wants from its higher education institutions and the degree to which society is willing to invest in higher education.

Discussion points

In your view, is the current balance between universities' 'market' and 'non-market' activities about right? How well do you think the sector currently 'makes the case' for the social value it helps to create?

How do you assess the likely impact of new funding arrangements for research (the 'impact' agenda) and for teaching (the raising of student fees). How might these affect the balance struck between 'private' and 'public' good?

How important do you think it is that the sector seeks to develop a means of quantifying in a holistic way the value of non-market benefits? Are there dangers in quantifying social value in monetary terms?

Who should be involved in ongoing negotiations over the future 'balance' of university activities? How can the views of these different stakeholders best be heard?

In discussing 'value', how far do we also need to debate and take account of 'values'?

How can we ensure that spending time and energy better articulating the social value of universities actually leads to tangible benefits to wider society – and doesn't become an exercise in navel gazing?

Appendix 3: BBC and public value – the ‘public value test’

In 2004 the BBC adopted its own interpretation and application of a public value framework to embed within its management and governance. A full exposition of its approach is contained in the document *Building Public Value -Renewing the BBC for a Digital World* (2004). A comprehensive critique of the BBC’s approach, its development and the issues it raises is contained in an extensive 2007 report by Richard Collins of the Work Foundation: “Public Value and the BBC.”⁸⁵ The BBC interpretation of public value placed an emphasis on the management and governance elements of public value as a performance framework, identifying its fundamental organisational principles, and its objectives in reference to its audience. It introduced the ‘public value test’ as a way it could demonstrate it would continue to review and check that it continued to deliver against those objectives and in line with its fundamental principles.

The BBC is a public sector organisation – taking the form of a public corporation established by Royal Charter and which is intended to operate as an independent organisation. It faced its own challenges of operating in a rapidly changing technological environment which was also impacting on the attitudes and expectations of its audience and of its licence payers. The BBC embraced the concept of ‘public value’ as a way to explain and elaborate on why it should continue be permitted to ‘confer the obligation’ of a compulsory licence fee. While not part of general taxation the licence fee is not optional (and indeed the Office of National Statistics has classified it as a ‘tax’)⁸⁶ and hence is part of the environment of ‘compliance’ that the public value framework recognises. It is worth noting here that the in-depth review by the BBC of its purposes and how to explain and frame them was driven by the immediate requirement to justify its funding – it was preparing for charter renewal and renegotiation of the licence fee. Accountability and justification for funding was at the heart of the ‘Value’ question for the BBC in the same way as it has been for the third sector, for public sector organisations and for universities. There is no getting away from the issue of resource allocation.

The BBC challenge in consideration of ‘public value’ shares a number of similar characteristics with ‘cultural’ organisations (including arts organisations, museums etc.) in the difficulty of defining ‘cultural value.’ It includes considerations of whether an artistic product (a programme for broadcast, in this instance), can have intrinsic cultural value or whether its value should be determined by the producer or by the recipient/viewer.

In its particular position as a as a broadcaster, the BBC, has to take into consideration the need to tread a fine line between broadcasting ‘what the public wants’ and broadcasting what the BBC believes they should want or ‘what is good for the public.’ The difficulties faced by the BBC are a good example here of the tension inherent within ‘public value’ and the ‘negotiation’ required to elicit ‘public value.’ The ‘public value test’ therefore was not a separate entirely objective factual process but the application of judgement to a range of evidence. Assessment of whether the programme or activity in question met the ‘public value test’ was effectively a performance management measure. The important thing was that the BBC was being seen to review and assess what it as doing in negotiation with ‘its public’ and against and agreed an ideal of public value. It sought to “give licence payers greater assurance that the BBC’s services will deliver against their wider public purposes.”⁸⁷

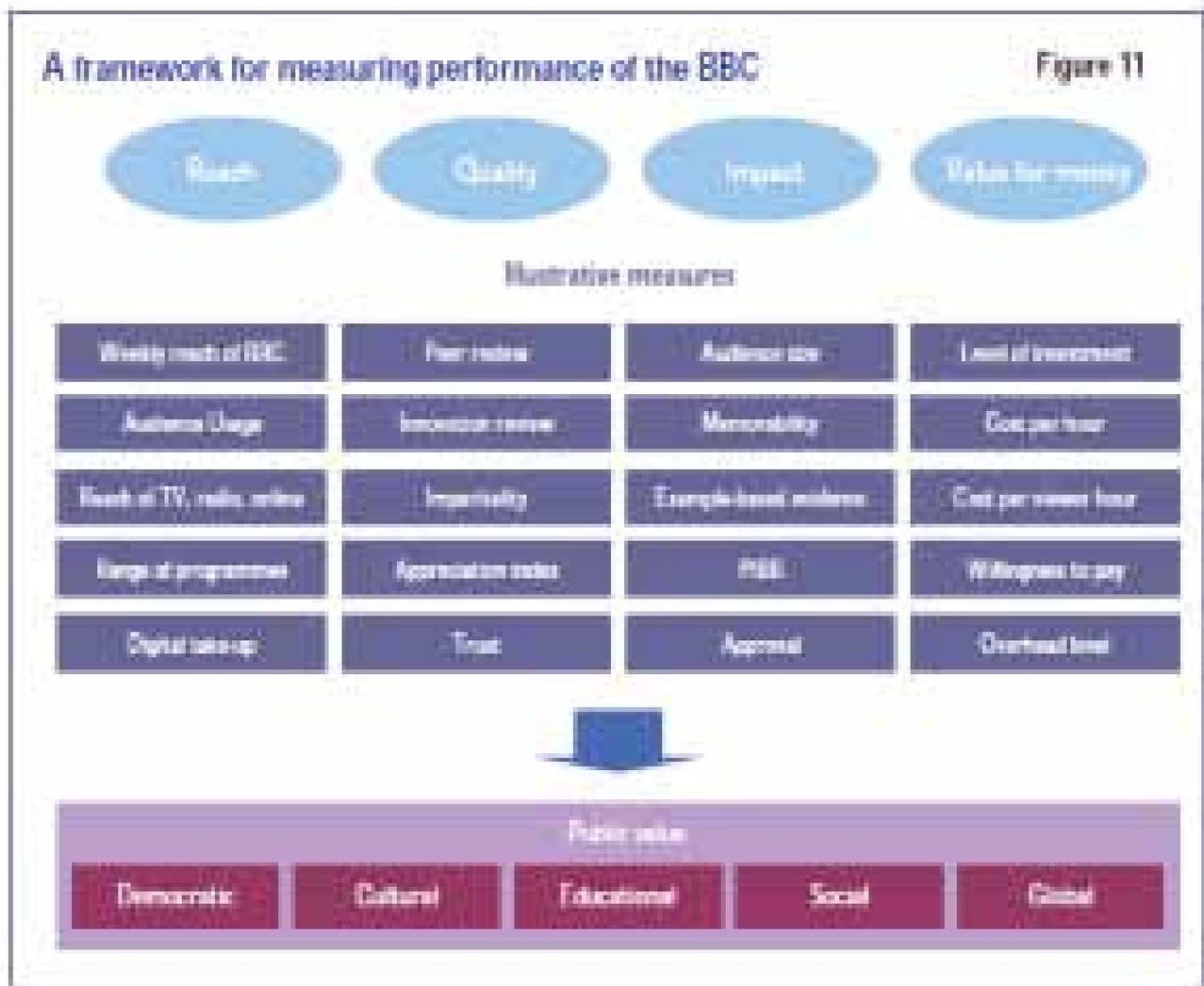
The BBC defined the public value they sought to create as involving five types of ‘value’:

1. Democratic Value – supporting civic life and national debate
2. Cultural and Creative Value – breaking new ground, celebrating cultural heritage
3. Educational Value – providing educational opportunities
4. Social and Community value – building shared understanding and tolerance
5. Global Value supporting the UK’s position in the world, showcasing British culture to a global audience.

This involved assessing their activities against their key ‘public purposes’⁸⁸ with four core measures of:

1. Reach
2. Quality
3. Impact
4. Value for money

They devised a mixture of quantitative and qualitative evidence to enable assessment (e.g. including audience figures, expressed user preferences, survey evidence using contingent valuation (willingness to pay), etc. These are outlined in the diagram below.



Source: *Building Public Value 2004*

Appendix 4: Definitions of impact in the Research Excellence Framework

For the purposes of the REF, impact is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia (as set out in paragraph 143).

Impact includes, but is not limited to, an effect on, change or benefit to:

- the activity, attitude, awareness, behaviour, capacity, opportunity, performance, policy, practice, process or understanding
- of an audience, beneficiary, community, constituency, organisation or individuals
- in any geographic location whether locally, regionally, nationally or internationally.

Impact includes the reduction or prevention of harm, risk, cost or other negative effects.

For the purposes of the impact element of the REF:

1. Impacts on research or the advancement of academic knowledge within the higher education sector (whether in the UK or internationally) are excluded. (The submitted unit's contribution to academic research excellence is assessed within the; 'outputs' and 'environment' element of the REF.)
2. Impacts on students, teaching or other activities within the submitting unit are excluded.
3. Other impacts within the higher education sector are included where they extend significantly beyond the submitting HEI. Impacts will be assessed in terms of their 'reach and significance' regardless of the geographic location in which they occurred, whether locally, regionally, nationally or internationally. The UK Funding bodies expect that many impacts will contribute to the economy, society and culture within the UK but equally value the international contribution of UK HE.

(From Guidance to the REF HEFCE 03.11)

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Appendix 6: Potential next steps

In order to take the SMEV approach further and to begin to test its viability as a tool for UK HE, there are 3 immediate 'next steps'. If undertaken simultaneously the development of a SMEV framework could be achieved relatively quickly.

1. A sector-wide data feasibility study

A survey report identifying and exploring the coverage, strengths, weaknesses and limitations of the data already being collected across UK higher education could be of potential use in a SMEV framework. This would include considering the data already collected and accessible through HESA and other organisations such as SCONUL and UCISA. It should also include consideration of extant data that is collected that may need particular permissions for its further access or use in analysis (e.g. data protection issues). This might include data returned under the Research Excellence Framework or data returned as part of the Transparent Approach to Costing (TRAC) process, as well as possibly to the QAA and other agencies. The new cross-research council collection system for research outputs (due for release in November 2011) may also be another future source. The sector-wide study should identify the extent to which existing data would be sufficient to deliver statistically meaningful results in a SMEV and where supplementary data may be required.

2. Initial development of master list of outputs

A survey of all UK institutions to initiate development of a master list of outputs (Descriptors) and volume measures (the appropriate units to use). This could be initially focussed using a version of the list of identified outputs and suggested volume measures compiled during the original pilot study of a single institution (this is included in Kelly 2005). The forthcoming research council collection system for research outputs could be the basis of the master list for research outputs. Institutional views could be sought on if there are additional outputs that need to be included (if anything has been omitted) or other volume measures that may be more suitable.

3. Initial development of a set of 'economic prices'

A preliminary analysis deriving a set of economic prices for the 'draft' master list of outputs. This would be useful at this point because information on economic prices would help determine the degree of disaggregation needed for output data. If two types of output appear to have the same economic price they could be aggregated. For example, if delivery of French language teaching appears to have the same output value as the delivery of other modern language teaching, only output data on 'modern languages' is required. If a number of outputs appear to have a low economic price detailed data on these outputs would not be necessary. This could help minimise the data burden.

Notes

- ¹ <http://www.universitiesuk.ac.uk/Newsroom/Media-releases/Pages/Universitieschallengedtogetrecognition.aspx>
- ² In this report the terms 'universities' and 'Higher Education Institutions'(HEIs) may be used interchangeably but all are taken to refer to institutions that are recognised as part of the UK Education system through inclusion in the official statistics produced by the UK Higher Education Statistics Agency (HESA).
- ³ 'Non-market' is used typically to refer to higher education services or outputs that are not bought or sold in commercial terms.
- ⁴ 'Degrees of Value: How Universities Benefit Society,' UUK and nef (2011)
- ⁵ The utilitarian approach characterised by Mr Gradgrind in Charles Dickens' *Hard Times* "In this life, we want nothing but Facts, sir; nothing but Facts!"
- ⁶ Source: HESA Students in Higher Education, 1995/96 and 2009/10.
- ⁷ The 'Third sector' is a term used to refer mainly to non-profit voluntary organisations charities and social enterprises.
- ⁸ See, for example, Economics and Culture (Throsby 2001), An up to date and insightful summary is provide by O'Brien (2010) in *Measuring the Value of Culture: a Report to the Department for Culture, Media and Sport*
- ⁹ For the latest evidence on the extent of engagement between university academics and the external community –, see the work by Abreu M., Grinevich V., Hughes A., and Kitson M, undertaken as part of the *Impact of HEIs on Regional Economies Research Initiative: Knowledge Exchange between Academics and the Business, Public and Third Sectors* (2009) <http://www.ukirc.ac.uk/object/rproject/3203/doc/AcademicSurveyReport%20201009.pdf>
- ¹⁰ There has been speculation that the UK Government may consider giving future recognition to establishment of 'for profit' universities in the UK; however this report is not considering the situation of potential 'for profit' UK institutions; as commercial entities they would have very different aims and objectives and the issue of 'social value' generation would not hold the same imperative for them.
- ¹¹ They are formally classified in the National Accounts as 'NPISH' – non-profit institutions serving households.
- ¹² For information on HEI charitable status see: <http://www.lfhe.ac.uk/governance/legal/charitablestatus.html>
- ¹³ Compliance with the 'Financial Memorandum' for example is a condition of public funds, as is acceptance of statutory requirements to return data to HESA etc.
- ¹⁴ *Securing a sustainable future for higher education*, The Browne Review, BIS (2010)
- ¹⁵ *Students at the Heart of the System*, BIS (June 2011)
- ¹⁶ *Assessment Framework and Guidance on Submissions* (REF 02.2011) http://www.hefce.ac.uk/research/ref/pubs/2011/02_11/02_11.pdf
- ¹⁷ See, for example Kelly & McNicoll, *Towards the estimation of the economic value of the outputs of Scottish higher education, SFC (2005 and 2008) and The Public Service Benefits of Higher Education*, HEFCE (2010)
- ¹⁸ See for example: *The impact of universities on the UK economy*, Universities UK (2009) and work undertaken as part of the ESRC/HE Funding Council research initiative, *The impact of higher education institutions on regional economies* (www.impact-hei.ac.uk)
- ¹⁹ Walter McMahon in, *Higher Learning Greater Good* (2009) has sought to develop a new way to incorporate wider benefits into calculations of rates of return, and there is ongoing experimental work in Scotland (McGregor et al) to incorporate the McMahon approach in new economic modelling of higher education. This is discussed further in section 6.
- ²⁰ Many of the 'broader effects' are known as '**Externalities**' i.e. they are additional (sometimes accidental) effects on third parties. For example a piece of public art commissioned by the university and placed in university grounds may give pleasure to passers by, entirely unrelated to the university's purpose in setting it up. This would be described as an 'externality.' There can also be negative externalities – those most often mentioned are the effects of congestion, litter and disruption to neighbourhoods where there are large numbers of students resident.
- ²¹ 'Grey Literature' takes the form of reports, policy documents or commentary rather than articles in refereed academic journals.
- ²² The ESRC/HE Funding Bodies research initiative (2007-2011) the *Impact of HEIs on regional economies* has been the most extensive (possibly only) programme of research in the UK focussed explicitly on HEIs and their economic and social role; some headway has been made with this initiative , notably in the generation of some key new datasets and economic modelling techniques. But with this initiative concluded, there appears to be no new plans for funding of further research in this area.
- ²³ See <http://www.thelifeindex.org.uk/>
- ²⁴ 'Absorptive capacity' refers to the ability of the economy – through the skills of its workforce - to adapt and innovate, taking on board new ideas, new technology etc.
- ²⁵ For example see, *The economic impact of UK higher education*, Universities UK (2009), and the *UUK economic impact modelling system*, Universities UK (2006)
- ²⁶ But see McMahon (2009) *ibid* for new research in this area
- ²⁷ The UK Innovation Research Centre, a joint ESRC and NESTA centre (University of Cambridge and Imperial College London)
- ²⁸ Holsworth and Quinn, *HEIs and Local Communities: Forward and Backward Linkages* (2006)
- ²⁹ Bogdanovic, Lebeau & Longhurst, *Literature review: The civic role of higher education institutions and their constituencies* (2006)
- ³⁰ Angie Hart & Simon Northmore, 'Auditing and Evaluating University-Community Engagement: Lessons from a UK Case Study,' *Higher Education Quarterly*
- ³¹ Katerina Lisenkova (presentation given at the *Impact of HEIs on regional economies* final conference, Edinburgh, 2010)
- ³² Hermannsson, K., Lecca, P., Lisenkova, K.,McGregor, P. & Swales, K, *The system-wide impacts of the social and private market benefits of higher education on the Scottish economy: An illustrative "micro-to-macro" approach* (2011)
- ³³ Melinda Tuan, *Measuring and/or estimating social value creation: Insights into Eight Integrated cost Approaches*, Prepared for the Bill & Melinda Gates Foundation (2008)
- ³⁴ The Cultural sector is made up from a wide range of sub sectors including: Arts, Craft, Performing Arts, Music, Creative Design industries and Digital Media. Additionally it covers Heritage and Library and Archive services.
- ³⁵ Paul Di Maggio, 'Measuring the Impact of the Non Profit sector on Society is Probably impossible but possibly useful : A sociological perspective,' in Flynn and Hodgkinson (eds.) *Measuring the Impact of the non-profit sector* (2001)
- ³⁶ <http://www.forthsectordevelopment.org.uk/publications/Making%20the%20case%20-%20SAV%20guide.pdf>

- 37 Dave O'Brien, *Measuring the value of culture: a report to the Department of Culture, Media and Sport* (2010)
- 38 For the updated version of this framework, see *Outcomes Framework for Museums, Libraries and Archives* MLA (2010) http://www.mla.gov.uk/what/raising_standards/improvement/~media/Files/pdf/2008/outcomes_framework_v2.ashx
- 39 See <http://socialauditnetwork.org.uk/> for more information
- 40 Pearce & Key, Really Telling Accounts! (June 2008)
- 41 See Benchmarking the Regional Contribution of Universities (2009) Charles, Conway & Benneworth http://pie.pascalobservatory.org/sites/default/files/Benchmarking%20the%20regional%20contribution%20of%20universities%5B1%5D_1.doc
- 42 The PASCAL Observatory approach and the Universities that Count initiative are just two examples of these. Others include for example the UPBEAT project methodology developed by James Powell and Salford University (SEE: <http://www.upbeat.eu.com/about/>) or the Bradford University REAP project http://www.tufts.edu/talloiresnetwork/downloads/REAP_Report_Bradford_U.pdf)
- 43 It is also linked to another version pioneered by the European Social Return on Investment Network ESROIN
- 44 Blended Value is the notion that: "value is generated from the combined interplay between the component parts of economic, social and environmental performance." (Emerson 2003)
- 45 For a fuller explanation of these difficulties, see the report Wood and Leighton, *Measuring social value: the gap between policy and practice*, DEMOS (2010)
- 46 From *'Investing in Impact'* (2010)
- 47 Mark H Moore, *Creating Public Value: Strategic Management in Government*, Harvard University Press (1995)
- 48 Kelly, G., Mulgan G. and Muers, S., *Creating Public Value: An analytical Framework for Public Service Reform*. London: Cabinet Office (2002)
- 49 Benington and Moore, *Public Value Theory and Practice* (2011)
- 50 Allocative efficiency is about producing the right goods and services in the right quantities to meet demand. It is sometimes easier understood by thinking about its absence, For example the Soviet Union factory producing left foot shoes quickly and cheaply may have demonstrated *cost-efficient* production. However since there was very limited demand for left foot shoes without right foot shoes to match it was not *allocatively* efficient production.
- 51 One might also recall that the BBC is part of this 'compliance' regime, as the payment of the licence fee is obligatory – hence the BBC *needs* to demonstrate public value and that the public is getting what it wants in return for giving up the cost of the licence fee.
- 52 The HM Treasury Green Book
- 53 *HM Treasury Green Book: Appraisal and Evaluation in Central Government* (http://www.hm-treasury.gov.uk/data_greenbook_index.htm)
- 54 HM Treasury The Magenta Book: Guidance for Evaluation (http://www.hm-treasury.gov.uk/data_magentabook_index.htm)
- 55 *Measurement of Government Output and Productivity for the National Accounts*, Atkinson Review Final Report (2006) (<http://www.ons.gov.uk/ons/guide-method/method-quality/specific/public-sector-methodology/atkinson-review/final-report/index.html>)
- 56 A country's National Accounts are a set of macroeconomic accounts providing a comprehensive record of economic activity in the country and are compiled annually according to internationally agreed standards and practice.
- 57 SMEV is based on the principles of 'Welfare economics' which is a universally accepted part of fundamental economic theory.
- 58 The System of National Accounts is "... *A comprehensive accounting framework within which economic data can be compiled and presented in a format that is designed for purposes of economic analysis, decision-taking and policy-making. The accounts themselves...provide a comprehensive and detailed record of the complex economic activities taking place within an economy and of the interaction between the different economic agents ...that takes place on markets or elsewhere.*" (SNA, 1993)
- 59 See Kelly, McLellan and McNicoll, Towards the estimation of the economic value of outputs of Scottish Higher Education Institutions Report to the SFC (2005), and Kelly, McNicoll and Brooks, Next Steps Report (2008)
- 60 **Eurostat** is the main EU statistical agency which provides statistical information at European level and promotes the integration of statistical methods across the Member States of the European Union, candidate countries and EFTA countries.
- 61 See Kelly, McLellan and McNicoll, Towards the estimation of the economic value of outputs of Scottish Higher Education Institutions Report to the SFC (2005), and Kelly, McNicoll and Brooks, Next Steps Report (2008)
- 62 See *The Green Book*, HM Treasury for details
- 63 More detail on these pilots can be found in Kelly et al 2005 and Kelly et al (2008)
- 64 This is one of the 'characteristics' of organisational behaviour that can flourish within a not for profit university
- 65 Abreu M., Grinevich V., Hughes A., and Kitson M., (*Knowledge Exchange between Academics and the Business, Public and Third Sectors* (2009) (<http://www.ukirc.ac.uk/object/rproject/3203/doc/AcademicSurveyReport%20201009.pdf>)
- 66 The Higher Education Statistics Agency (HESA) currently collects and publishes data on student numbers within 'subject groupings' and it is likely that these subject groupings would be a sufficient level of disaggregation for meaningful statistical analysis.
- 67 A number of UK universities e.g. the University of Brighton have in fact begun to collect information on such activity and the range and volume can be quite extensive, See: *University of Brighton Community Engagement Report* (2006-07)
- 68 Strictly speaking the 'economic efficiency' prices i.e. the prices that would be achieved in a market operating without any major distortions or hindrances to free trade.
- 69 See *Transport Analysis Guidance 3.5.1 Value of Time and Operating Costs*, Department for Transport (2011)
- 70 With checking to avoid double-counting.
- 71 See *Transport Analysis Guidance 3.5.6 Values of Time and Operating Costs* Department for Transport (April 2011) (<http://www.dft.gov.uk/webtag/documents/expert/unit3.5.6.php#012>)
- 72 Society College of National and University Libraries
- 73 Universities and Colleges Information Systems Association
- 74 Source: *HESA Students in Higher Education 1995/95 and 2009/10*
- 75 HEFCE funds Knowledge Exchange as a third element of HE's mission. Through HEIF (the Higher Education Innovation Fund) and the new Research Excellence Framework it embraces economic and social knowledge-based inter-actions, linked with both research and teaching.

- ⁷⁵ The Beacons for Public Engagement: <http://www.publicengagement.ac.uk/>
South East Coastal Communities: <http://www.coastalcommunities.org.uk/>
- ⁷⁶ Abreu, Grinevich, Hughes and Kitson, *Knowledge Exchange between Academics and the Business, Public and Third Sectors*, UK-IRC (2010)
- ⁷⁷ <http://www.universitiesuk.ac.uk/Newsroom/Media-releases/Pages/Universitieschallengedtogetrecognition.aspx>
- ⁷⁸ <http://www.rcuk.ac.uk/kei/impacts/Pages/home.aspx>
- ⁷⁹ <http://www.hefce.ac.uk/econsoc/buscom/hebcij/>
- ⁸⁰ Brewis, Russell and Holdsworth, *Bursting the Bubble: Students, Volunteering and the Community*, NCCPE (2010)
- ⁸¹ Hart, Northmore and Gerhardt, *Auditing, Benchmarking and Evaluating Public Engagement*, NCCPE (2009)
- ⁸² The UK National Ecosystem Assessment (UK NEA) <http://www.defra.gov.uk/news/2011/06/02/hidden-value-of-nature-revealed/>
- ⁸³ Katerina Lisenkova, *The system-wide social benefits of higher education*, Presentation given at the ESRC/Funding Council Conference on the Impact of Higher Education on Regional Economies (November 2010)
- ⁸⁴ Moore, M., *Creating Public Value: Strategic Management in Government*, Harvard University Press (1997)
- ⁸⁵ Richard Collins The Work Foundation, *Public Value and the BBC*, Report for the Work Foundation Consortium on Public Value (2007)
- ⁸⁶ "in line with the definition of a tax, the licence fee is a compulsory payment which is not paid solely for access to BBC services... A licence is required to receive ITV, Channel 4, Channel 5, satellite, cable," Office of National Statistics, News release: Classification of public sector television, quoted in in House of Lords Select Committee on Charter Review Second Report
- ⁸⁷ Building Public Value
- ⁸⁸ Described by Collins as: sustaining citizenship and civil society; providing education and learning; stimulating creativity and cultural excellence; representing the UK, its nations, regions and communities; bringing the UK to the world and the world to the UK; building digital Britain.

National Co-ordinating Centre for Public Engagement

The National Co-ordinating Centre for Public Engagement's vision is of a higher education sector making a vital, strategic and valued contribution to 21st-century society through its public engagement activity. We are working to help support universities to improve, value and increase the quantity and quality of their public engagement and embed it into their core practice.

The NCCPE is part of the National Beacons for Public Engagement initiative, funded by the UK Higher Education Councils, Research Councils UK and the Wellcome Trust.

The six Beacons are university-based collaborative centres that help support, recognise, reward and build capacity for public engagement work, based in: Newcastle and Durham, Manchester, CUE East UEA, UCL, Wales and Edinburgh.