



RE: Reflection paper on the value of research universities

FROM: Rector's Secretariat

To: IARU Presidents

IARU's members share the experience that expectations from society and stakeholders towards universities are increasing and presumably will continue to do so for the foreseeable future. Moreover, these increased expectations, which can be fully legitimate, are often translated into societal and/or political demands.

IARU therefore recognizes a strong need for a dual response. Firstly, it is a constant challenge to improve the understanding – among decision-makers and the general public – of the fundamental societal role played by research universities. Secondly and in order to achieve the first goal, it is essential that universities themselves keep on improving the ways in which they demonstrate the direct and indirect value they bring to society at large, the labour market, business communities etc.

For quite some time, IARU has constituted an interesting laboratory for debating the issue and attempting to measure the value of research intensive universities. The discussions were initiated at the IARU Presidents' Meeting in April 2010 and further developed at a subsequent workshop at ETH Zürich in October 2010.

In this relation, IARU has been discussing different methodologies for measuring the value of universities.

The following reflection paper outlines some of the challenges to discuss at the Copenhagen workshop 25 April about why and how the value of universities should be measured.

The value of universities

1. Research and higher education are a high priority on the political agenda these years. Tax payers and politicians alike are asking for value for money. Universities are increasingly being held accountable, not only through bibliometrical "facts", qualitative indicators, anecdotes or through their ability to attract funding, but also through "hard" facts and bottom line numbers that show the value of the universities for companies and society.
2. The links between universities and wealth creation have been used to justify the increase in government funding of research in Europe and elsewhere. However, rarely have the universities' impacts been measured in a quantitative way and never, it can be argued, comprehensively.

3. IARU believes that research universities play an important role in their respective countries by contributing to society by reaching for the highest level of education and research.
4. IARU also believes that it is important for both universities and society to be able to sensibly measure the impact of universities in order to attempt to prove to "investors", the public and to ourselves how – and how much – our research and education contribute to society.
5. Analyses of the economic impact of universities on society widen understanding and perceptions of how complex organisations work and their impact on stakeholders. It can serve to effectively document the value of certain "value flows" of the university in order to strengthen the universities' argument, that the activities of universities are indeed important to society.
6. The purpose of measuring is also to provide insight that informs future decision-making and resource allocation processes while being realistic about the level of detail that can be captured and concluded through analysis.
7. It should however also be taken into account, that universities face a real challenge when measuring their value: The breadth of their contribution poses a particular problem for the analyst. It is fairly easy to measure the impact of new inventions sold to the industry or to measure the value of spinoffs, while measuring the value of educating good historians, language teachers or psychologists poses a real challenge. But at the same time both the size and time scales of investment involved demand a sound information base. Analysis is both difficult and essential.

Research universities contribute to society

8. Universities' fundamental contribution to society lies in creating and passing on knowledge and engaging with society in its application. Research intensive universities are formed gradually to serve the greater needs of society and many have evolved over decades or centuries.
9. IARU argues that research university value can be divided into four main flows:
 - a. Research (production of articles, publication and access to research)
 - b. Education (the knowledge and "soft skills" of candidates)
 - c. Knowledge exchange (collaboration with the outside world, hiring of graduates by industry, consultancy, patent/licensing/spinoff companies)
 - d. Direct economic contribution (Fiscal contributions, building projects in local areas etc).
10. This also means that the value of universities should not be measured in terms of how much money universities by themselves can make. Instead, it should be measured by

their ability to help fuel the innovation ecosystem, which generates wealth for companies that effectively translate discoveries to commercial success, as well as influences and informs government policy.

11. IARU argues that the crux of the specific value of research intensive universities is that the four main value flows of universities are interrelated and interact in a way that creates value far beyond the simple sum. The fact that the four flows are gathered in one university, in the same geographical space, is hence a key to understanding the special value of research intensive universities. Research, education and exchange of knowledge with the outside world fertilize each other: Data from the industry create the basis for basic and applied research, contact with students inspires the researcher, researchers uses students in their research, companies exchange knowledge with graduates when they employ them and through internships or student projects etc.
12. This means that research intensive universities can perform basic research with a sufficiently broad scope and adequate cost-effectiveness, and thus be the pacemaker for the creation of new products and technologies, a think-tank for governmental strategies and regulations and a provider of skilled manpower to industry and society.

How the value of research universities can be measured

13. When measuring the value flows of a university, it is essential to take into account that a good part of the measurable value such as collaborations with industry or spinoffs is not a primary feature but is derived from the more fundamental activities of universities.
14. The overall value of universities as cultural and societal institutions is very difficult to measure. The value of good high school teachers, people with language skills, economists, doctors, lawyers, musicians, historians etc. is difficult to measure in exact numbers.
15. It is also essential to keep in mind the complexity and time span of research and education. Discoveries that might seem without any immediate benefit can turn out to be extremely valuable to future generations of researchers – and to society. Without an understanding of the structure of the genome, we would not be able to develop certain interventions that will treat disease. Without basic research in material science, it would be impossible to develop highly efficient solar panels. And without basic research we would not be able to develop plants that resist drought.
16. Finally IARU believes that a good part of the value of research intensive universities lies in the fact that the four value flows (research, education, knowledge exchange and direct economic contributions) are gathered in the same geographical space and thereby closely interrelated.

17. When measuring university value, the following indicators should thus be taken into account:
 - a. All of the four value flows should be measured.
 - b. Time span – measuring the value of universities on a short timescale will not make sense. A narrow focus on short-term economic impact should be avoided.
 - c. Level of exchange of knowledge is a crucial indicator of value: How much knowledge is exchanged – and how does it benefit society?
 - d. The values which cannot easily be measured should nevertheless be clearly indicated in every study.

18. For IARU members, it should be a goal to further develop methods of measuring the value of research intensive universities in order to be able to improve the arguments of the societal impact of universities.

To sum up, it can be argued that:

19. It is possible and necessary to measure important aspects of the value of research universities. However, the total societal value can never be measured in full.

20. The value that a specific University creates can be measured on four different performance indicators:
 - a. Research (production of articles, publication and access to research)
 - b. Education (the knowledge and skills that graduates bring with them when they leave the university)
 - c. Knowledge exchange (collaboration with the outside world, hiring of graduates by industry, consultancy, patent/licensing/spinoff companies)
 - d. Direct and indirect economic contribution (the economic impact that a University has on the economic activity in it's city, region and/or country).

21. The currently available methods of measuring the value of universities show a way forward, yet leave a substantial amount of work to be done. The IARU members commit themselves to further explore other and more comprehensive ways to measure important aspects of the value that a university brings to society – for example to explore news ways of measuring collaboration with public partners and the value of education.