ASSESSING THE IMPACTS OF PUBLIC RESEARCH

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Nordic Summit on Universities for Impact
Trondheim
June 8, 2016

BETTER POLICIES FOR BETTER LIVES

The OECD – “Better Policies for Better Lives”

- The OECD is an intergovernmental organisation, with 34 Member States
- Its mission: a platform for government policies: exchange of policy experience, policy analysis, measurement, impact assessment
- Covers most government range of activities: economy, finance, competition, taxes, labour, social affairs, environment, education, science and innovation etc.

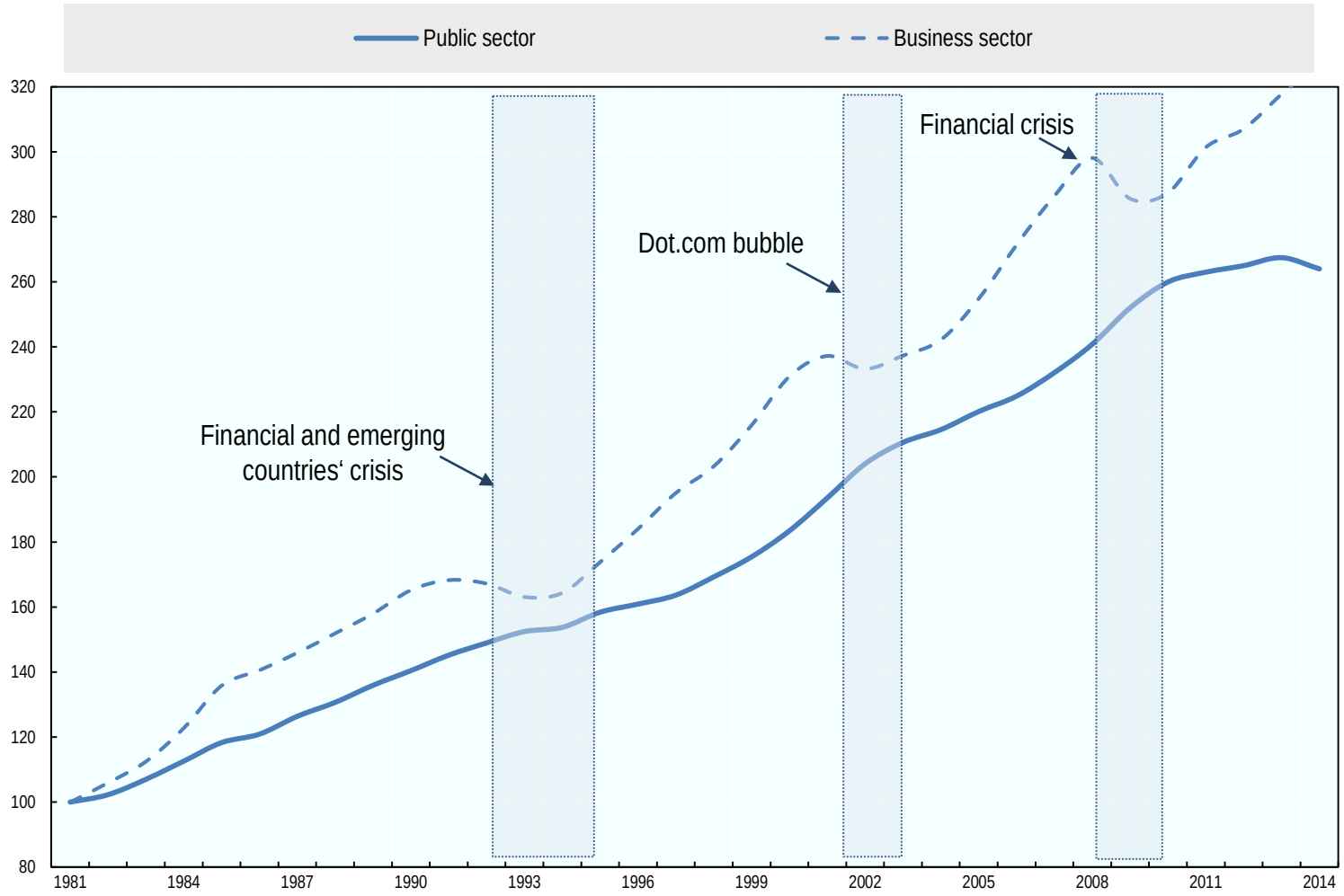
Assessing Impacts of Public research

A growing pressure to assess impact:

- Government are under budgetary pressure
- There is an increasing amount of data available (Big Data) and increasing capacity to make sense of them (statistical methods)

Public sector research is stagnating

OECD R&D expenditure, index 1981=100



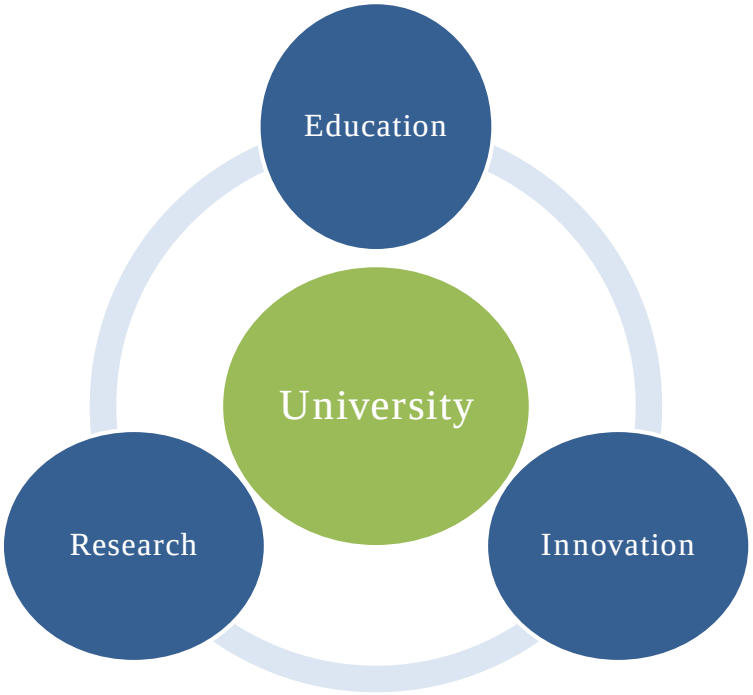
There is specific pressure on Universities

- The funding of universities is increasingly competitive (projects or institutions, centers of excellence etc.) => assessment
- Universities are expected to have impact

Impact on What?

The Knowledge Triangle

- **Education, research, innovation/ third mission**
- **Excellence** in each activity
- **Connections** between activities: knowledge transfers from research to innovation and education, ability to place students etc.
- Local, national, global impact



Measuring Impact: Indicators

Indicators are being developed:

- Education: diploma, placement (surveys)
- Research: publications, prizes
- Innovation: contracts, patents, spin-offs, jobs created, contributions to environmental, social challenges
- Need also indicators of input: faculty staff, researchers, funding etc.

The Data Requirements for Impact Assessment

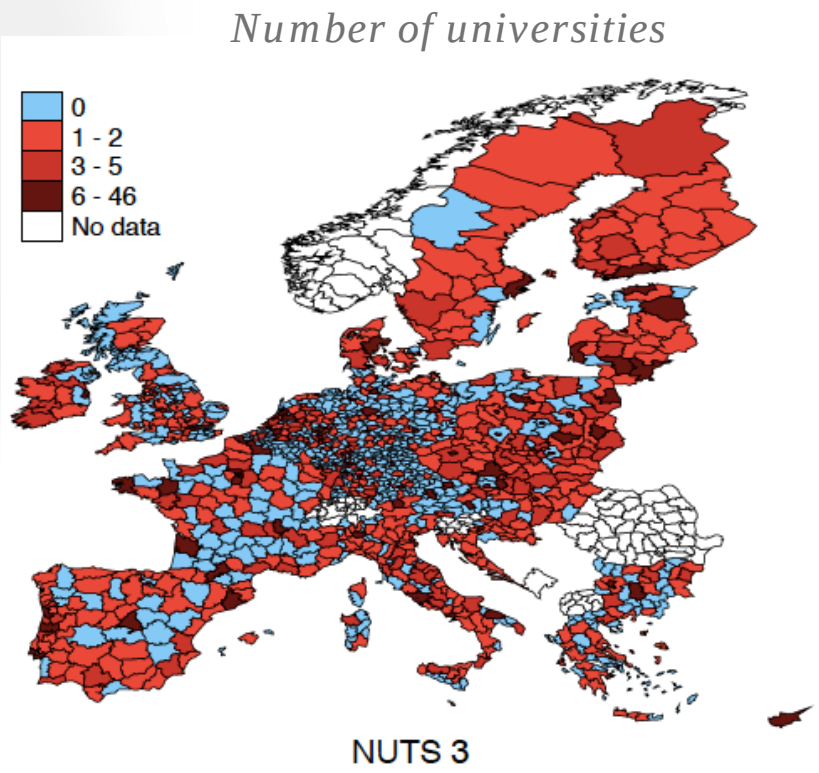
Impact assessment of individual universities needs to be:

- Comparative: single university assessment has limited interest
- Cross country: especially for the top layer, they compare with peers across the globe
- Neutral (arising trust)

Develop national-level data source for European countries from ETER database

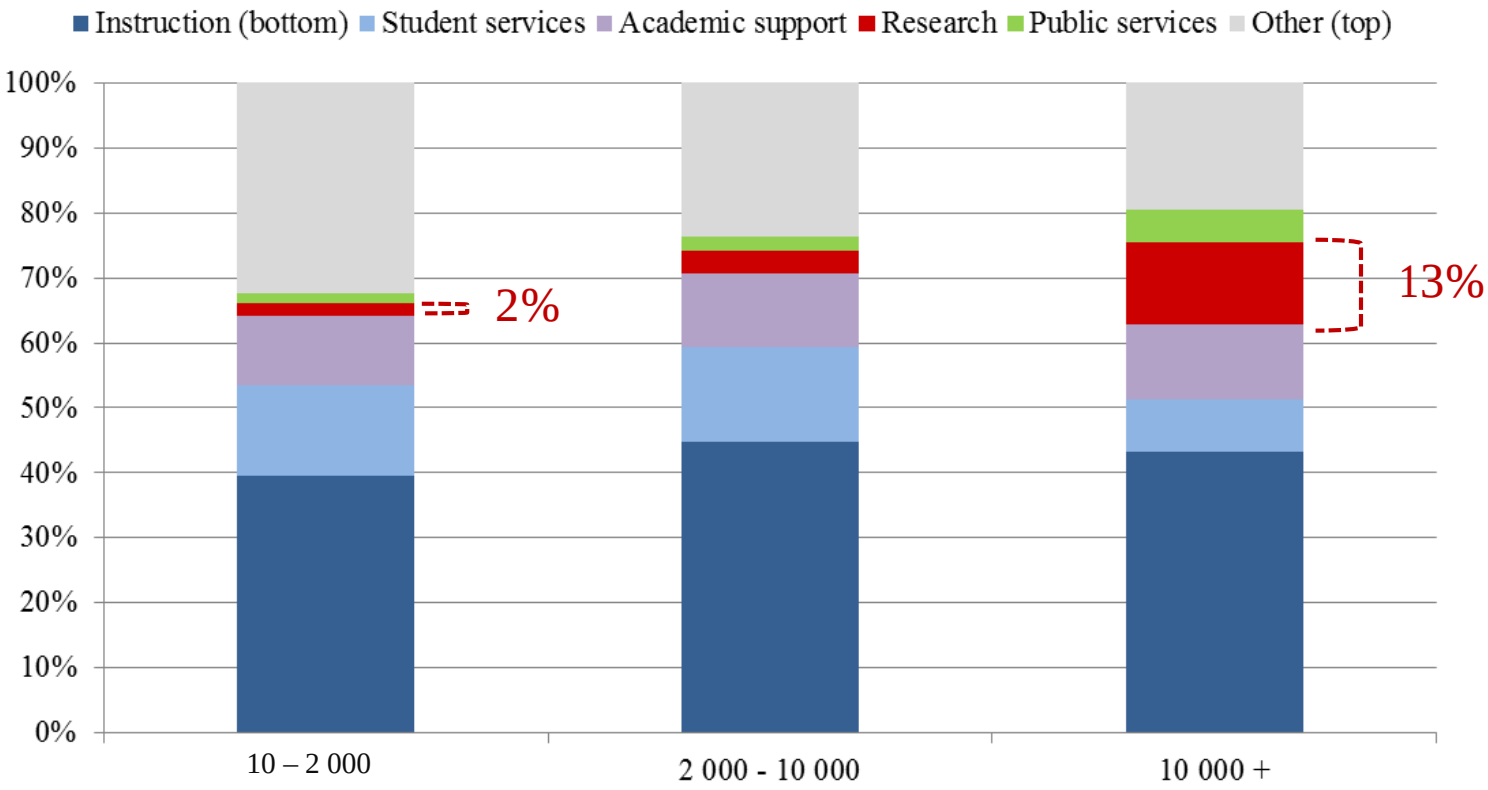
University	Country	v1	v2	v3	...
Universität Linz	Austria	97	51	56	
Universität Wien	Austria	74	33	29	
Fachhochschule Kärnten	Austria	35	85	94	
Vrije Universiteit Brussel	Belgium	72	65	30	
Universiteit Gent	Belgium	32	85	72	
University of New York in Prague	Czech Republic	50	79	85	
Masaryk University	Czech Republic	61	49	39	
University College Lillebælt	Denmark	81	56	74	
Aarhus Universitet	Denmark	36	93	46	
...					

Country	v1?	mean(v2)	mean(v3)	...
Austria	1	69	56	
Belgium	0	52	75	
Czech Republic	1	56	64	
Denmark	0	59	75	
...				



a) HEIs with large number of students devote larger share of expenditure to research

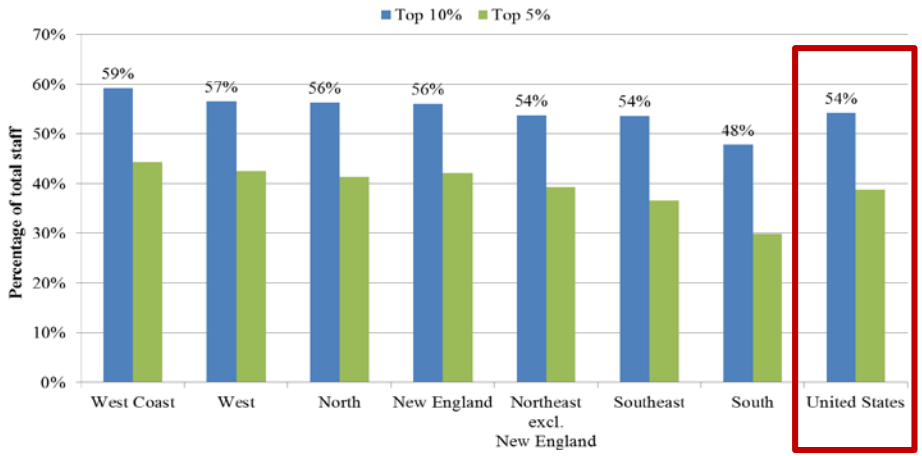
Average expenditure shares of different activities, by size of annual student enrolment category for universities in the United States in 2012



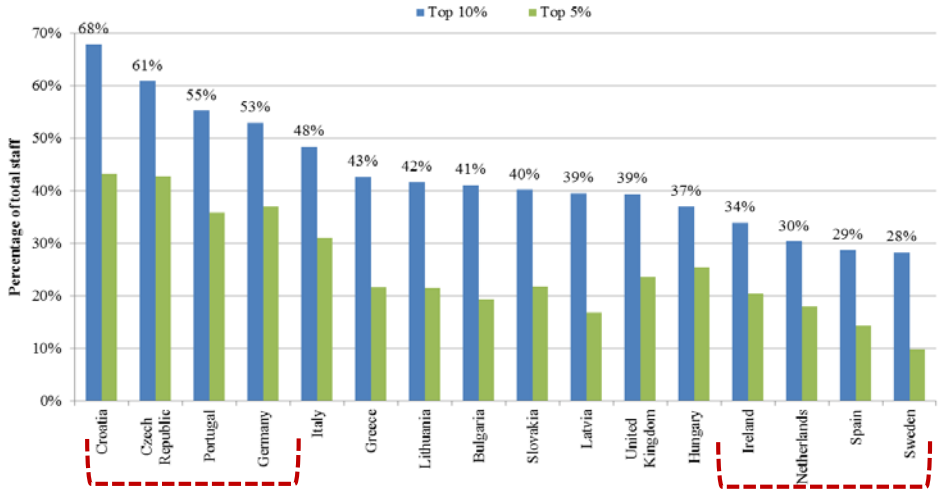
Notes: Expenditure figures in the US data combine different accounting standards for public and private HEIs. Consequently only shares can be reported for all HEIs. N=1 768.
Source: OECD based on IPEDS database

b) Largest institutions in terms of staff employ a large share of all research staff

Proportion of total academic staff accounted for by top institutions in terms of staff, 2012



In the US, the **largest 10% of institutions** in terms of staff account for **more than 50% of all research staff**

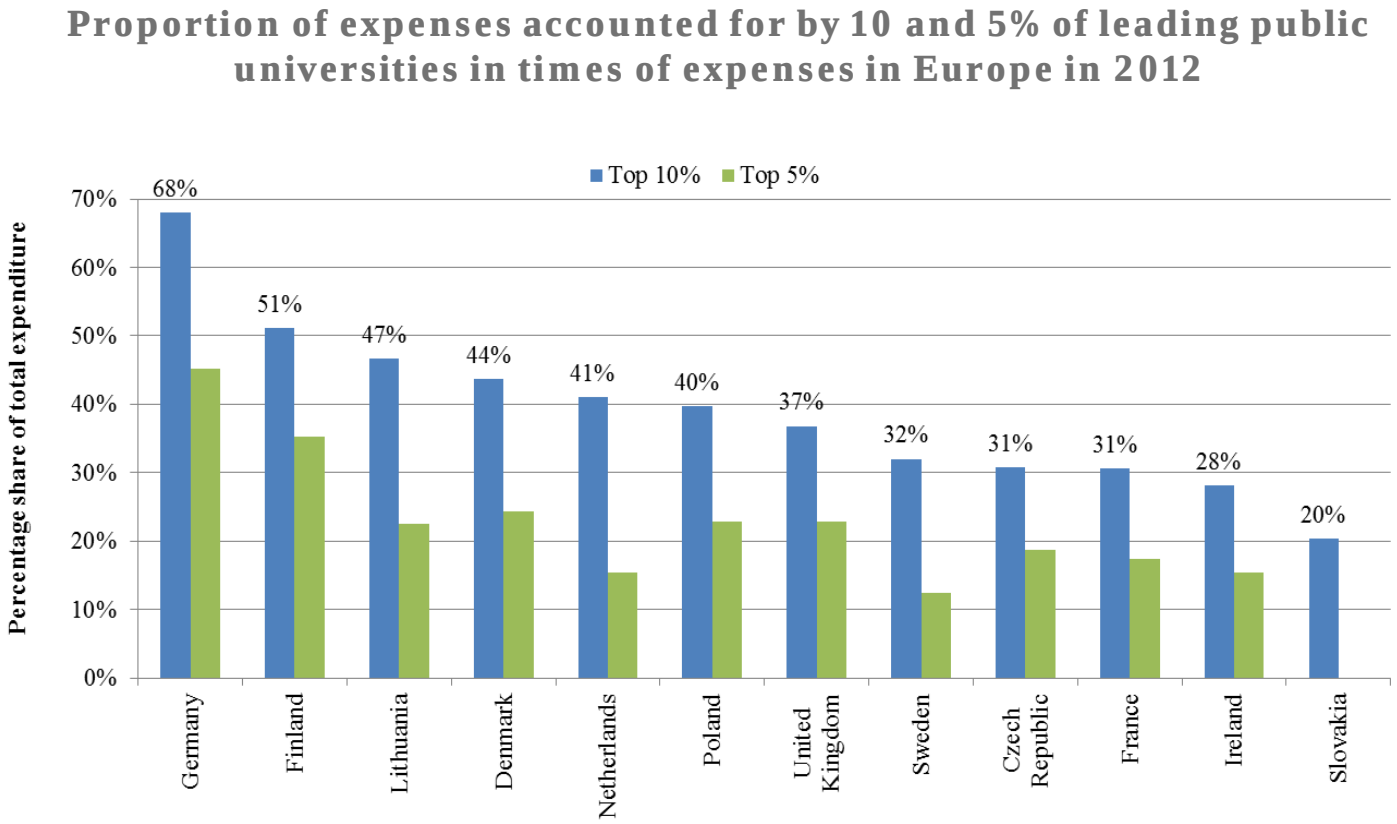


Similar situation in **Europe**, although there are differences between countries

Particularly high concentration

Relatively low concentration

c) Total expenditures (on all activities) are also highly concentrated



10% institutions with largest research expenditures account for **93% of all US research expenditures**

Notes: For Europe, spending is total expenditure for public institutions in countries with at least 10 observations. For the United States, expenditure is measured by core expenses (GASB accounting basis). N=924 (Europe).
Source: OECD analysis of IPEDS and ETER databases.

Building an International Data System for Impact Assessment of Universities at the Age of Open Science

Universities should share the data that they have on their own activity and impact by posting it on a unique, international and open access database;

This data should be built according to some agreed methodology which would guarantee their quality (including neutrality).

High quality impact assessment

- Coping with **non-linearities** in impacts
- Identifying **complementary policy impacts**
- Identifying **causality** as central problem i.e. address challenge of *attribution*
- Demonstrating **additionality**
- **Timing** of expected impact needs to be factored in assessment
- **Evidence based** and **neutral**

Need for combining qualitative and quantitative approaches

High-Level meeting on the Knowledge Triangle: Transforming Higher Education Institutions from the Inside and Outside

15-16 September 2016, Paris

OECD Delegates to the DSTI and EDU, leading stakeholders across academia, government and business

Policy Issues

Higher education institutions (HEIs) and public research organisations (PROs) are central actors in innovation systems. But the diversity of institutional models means that their contributions to innovation varies greatly within and across countries. The Knowledge Triangle approach in policy calls for the integration of education, research and innovation activities in HEIs and PROs in order to increase their socio-economic impacts at national and local levels.

The OECD will present the first findings of the Knowledge Triangle project that draws on cross-country statistical analysis to explore the impact that science, technology and innovation policies have on HEI performance. Twenty-two institutional case studies provide practical insights on the role that leadership, governance structures, incentives and stakeholder involvement play in helping institutions transform themselves to integrate research, education and innovation. activi

The high level meeting will offer a valuable opportunity to:

- ***Discuss the role of national research, education and innovation policies in enabling the transformation of HEIs from the inside and outside.***
- ***Learn about the strategic changes that some HEIs have made to transform the way they deliver education, research and innovation.***
- ***Understand the role that education and training policies play in building innovation capacity and in fostering a "culture" of innovation.***
- ***Meet fellow policy makers, university and business leaders interested in helping HEIs seize the opportunities of globalisation, digital technologies and place-based economic development.***

Further information

Project website:

http://www.oecd.org/sti/inno/impact-assessment-public.htm

Innovation Policy Platform:

https://www.innovationpolicyplatform.org

Impact Assessment of Innovation Policy:

https://www.innovationpolicyplatform.org/impact-assessment-innovation-policy-oecd-project