

Regional Performance of Universities

knowns and unknowns, opportunities and challenges

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The Committee of the Regions (CoR)
Brussels, Belgium, 26 June 2015*

U-Multirank 2015 is the most comprehensive international data comparison in higher education



➤ 1,200

(applied) universities are included with publicly available data

➤ 80

countries have universities in U-Multirank

➤ 670

of the 1,200 universities have provided comprehensive data

➤ 1,800

faculties/departments are included in the 7 field-based rankings: (psychology, medicine and computer science, as well as physics, electrical and mechanical engineering and business studies)

➤ 7,500

study programmes within these faculties are included

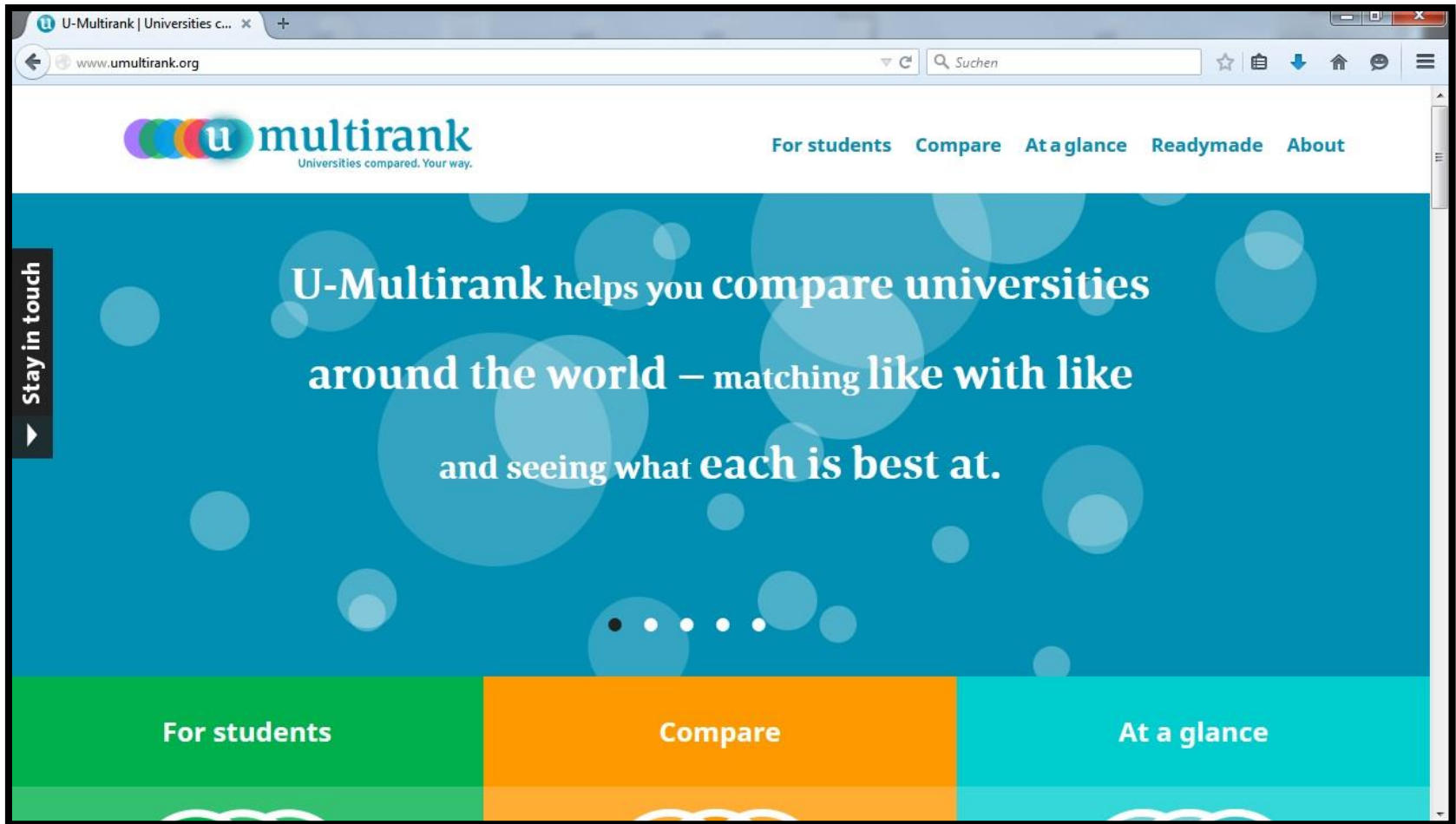
➤ 85,000

students completed the student satisfaction survey

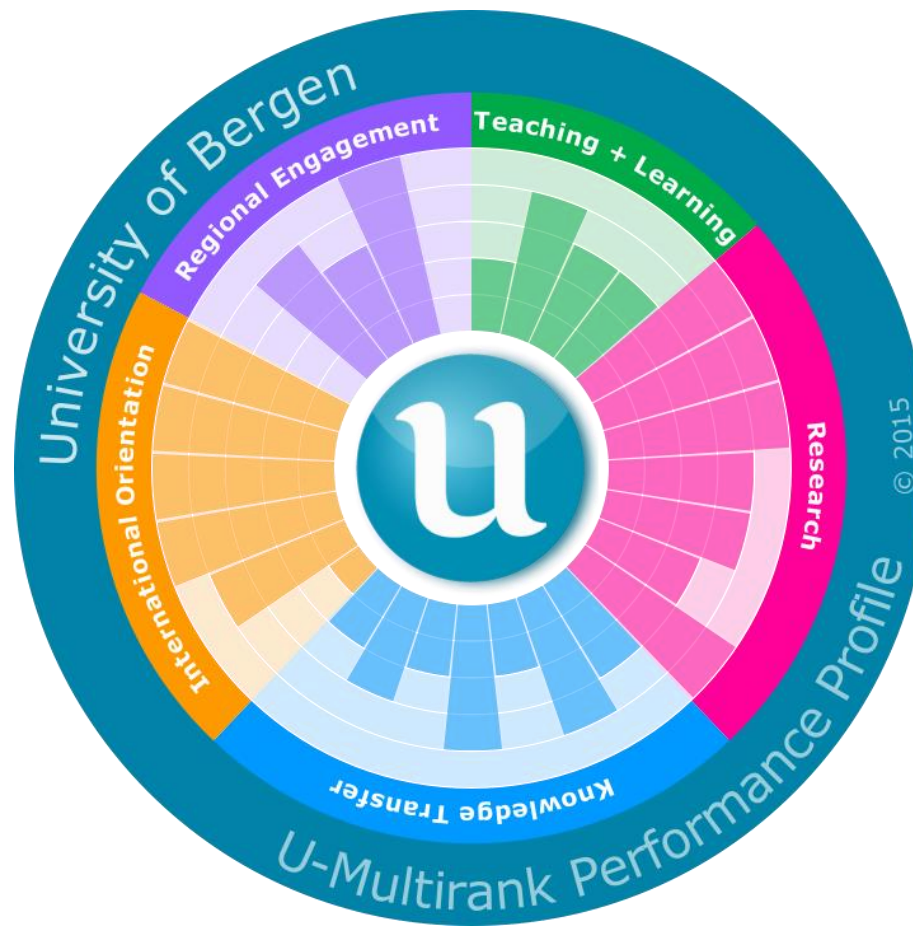


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www.umultirank.org



Differences between university profiles are made visible



Selection of performance indicators

Teaching & Learning

Bachelor graduation rate	Masters graduation rate	Graduating on time (bachelors)	Graduating on time (masters)
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Research

Citation rate	Research publications (size-normalised)	External research income
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Knowledge Transfer

Co-publications with industrial partners	Income from private sources	Patents awarded (size-normalised)	Publications cited in patents
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International Orientation

Student mobility	International joint publications
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Regional Engagement

Bachelor graduates working in the region	Regional joint publications	Income from regional sources
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Navigating U-Multirank's website:



- 1: Go to 'Compare'
- 2: Compare 'like with like'
- 3: Compare 'universities as a whole'
- 4: Select filter: 'Regional engagement: New entrants from the region = high'
- 5: Select performance indicators: 'Research' (2 indicators related to excellence); 'Regional engagement' (3 indicators)
- 6: Select country or geographical zone: 'European Union'

End result: 98 higher education institutions for in-depth comparison



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Data quality on Regional Engagement is problematic



- **Graduate (un)employment and university income from regional sources**
 - Lack of data for many institutions
 - Lack of comparability within existing data
- **Indicators by “region”**
 - But what exactly is a “region”?



Within-country “regions” in Europe

Official administrative units

NUTS2 level (‘provinces’); NUTS3 level (cities, city agglomerations, or other geographic sub-units)

Topographic entities

(village, town, city)

Physical space

(within defined traveling distance, a kilometer radius)

Other

Other definitions, non-defined, not specified, unknown

Change measures

Show scores

Show the whole table

★ Show favourites only

Research +

Research publications (size-normalised)

Top cited publications

Regional Engagement +

Bachelor graduates working in the region

Regional joint publications

Income from regional sources

A-Z Top scores

			Research publications (size-normalised)	Top cited publications	Bachelor graduates working in the region	Regional joint publications	Income from regional sources
★ U Luxembourg	LU		●	●	●	○	○
★ U Torino	IT		○	●	●	●	●
★ U Padua	IT		●	●	●	●	●
★ Tech U Berlin	DE		○	●	●	●	○
★ Carinthia UAS	AT		○	○	●	○	●
★ Aurel Vlaicu U Arad	RO		○	○	●	●	●
★ BA Sch. Business & Finance	LV		○	×	●	×	○
★ U Bari	IT		○	●	●	●	—
★ U Agric. & VetMed Cluj-Napoca	RO		○	○	●	●	○
★ U College Cork	IE		●	●	●	○	○
★ Daugavpils U	LV		○	○	●	○	○

PDF export

● A (Very good) ● B (Good) ● C (Average) ● D (Below average) ● E (Weak) — Data unavailable × Not applicable

Change measures

Show scores

Show the whole table

★ Show favourites only

Research		Regional Engagement		
Research publications (size-normalised)	Top cited publications	Bachelor graduates working in the region	Regional joint publications	Income from regional sources

A-Z	Top scores					
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★ Šiauliai State College	LT	–	–	●	–	●
★ ICN Business Sch. Nancy-Metz	FR	●	×	●	×	●
★ Aurel Vlaicu U Arad	RO	●	●	●	●	●
★ Vilnius Gediminas Tech U	LT	●	●	●	●	●
★ UAS Würzburg-Schweinfurt	DE	●	×	●	×	●
★ Vilnius UAS	LT	●	×	●	×	●
★ Kaunas U Tech	LT	●	●	●	●	●
★ Saint-Louis U	BE	●	×	–	●	●
★ U Milano Bicocca	IT	●	●	●	●	●
★ U Rennes 2	FR	●	●	●	●	●
★ Catholic U Louvain	BE	●	●	×	●	●

PDF export

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Regional joint publications

<i>Level</i>	Institutional
<i>Dimension</i>	Regional Engagement
<i>Definition</i>	The percentage of the university's research publications that list at least one co-author with an affiliate address within close proximity of the institution (within a distance of 50 km).
<i>Rationale</i>	Co-publications with authors located elsewhere in the institution's geographical region are a reflection of regional linkages between the university and regional partners.
<i>Data source</i>	CWTS/Web of Science
<i>Data elements</i>	Number of research publications that list at least one affiliate address of co-authors in the same 'region' (50 km range) Total publication output
<i>Time reference</i>	Period 2010 - 2013
<i>Formula</i>	$\frac{\text{score_on_regional_co - publications}_{2010-2013}}{\text{total_publication_output}_{2010-2013}}$

Change measures

Show scores

Show the whole table

★ Show favourites only

Research		Regional Engagement		
Research publications (size-normalised)	Top cited publications	Bachelor graduates working in the region	Regional joint publications	Income from regional sources

A-Z		Top scores					
★	Hanze UAS	NL	●	●	○	●	●
★	Polytech. Inst. Setúbal	PT	●	●	●	●	○
★	Saint-Louis U	BE	●	×	—	●	●
★	Riga Stradins U	LV	●	●	●	●	○
★	U Rome Tor Vergata	IT	●	●	○	●	●
★	Cork Inst. Tech	IE	●	●	○	●	○
★	Latvia U Agriculture	LV	●	●	—	●	○
★	Roma Tre U	IT	●	●	—	●	—
★	U Milano Bicocca	IT	●	●	○	●	●
★	U Agric. & VetMed Cluj-Napoca	RO	●	●	●	●	○
★	Aurel Vlaicu U Arad	RO	●	●	●	●	●

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Regional joint publications

Top 10 Higher Education institutions within the European Union with highest percentage of co-authored research publications with local partners (either in the public sector or industry)

Instituto Superior de Engenharia de Lisboa	Portugal	87%
Hanze University of Applied Sciences	Netherlands	84%
University Guglielmo Marconi	Italy	81%
Fernando Pessoa University	Portugal	75%
Agro ParisTech	France	66%
ENSAE Graduate School of Economics, Statistics and Finance Paris	France	65%
Polytechnic Institute of Setúbal	Portugal	63%
Descartes University Paris 5	France	60%
Polytechnical Institute of Coimbra	Portugal	59%
National Polytechnical Institute of Toulouse INPT	France	59%

Future indicators in multirank ?

Universities compared. Your way.

‘Science-innovation ecosystems’

- Research collaboration between universities and ‘local industry’ (located within a 50 km radius of the university central location)
- Joint research publication data is available for 750 universities worldwide, including 277 European universities
- Which European universities have the largest share of joint research publications with local industry?

Budapest University of Technology and Economics	Hungary	68%
Eötvös Loránd University	Hungary	58%
Grenoble INP	France	56%
Semmelweis University of Budapest	Hungary	54%
University of Copenhagen	Denmark	54%
Eindhoven University of Technology	Netherlands	51%
London School of Economics and Political Science	United Kingdom	46%
University of Zagreb	Croatia	46%
University Paris-Est Creteil Val de Marne	France	45%
Chalmers University of Technology	Sweden	41%

Missing information on university contributions to regional economic development:

Impact on regional workforce development

- Master student internships in regional enterprises
- Degree theses in cooperation with regional industry (Master, Industrial PhDs)
- Percentage of PhD graduates working in the region

R&D collaboration with local industry

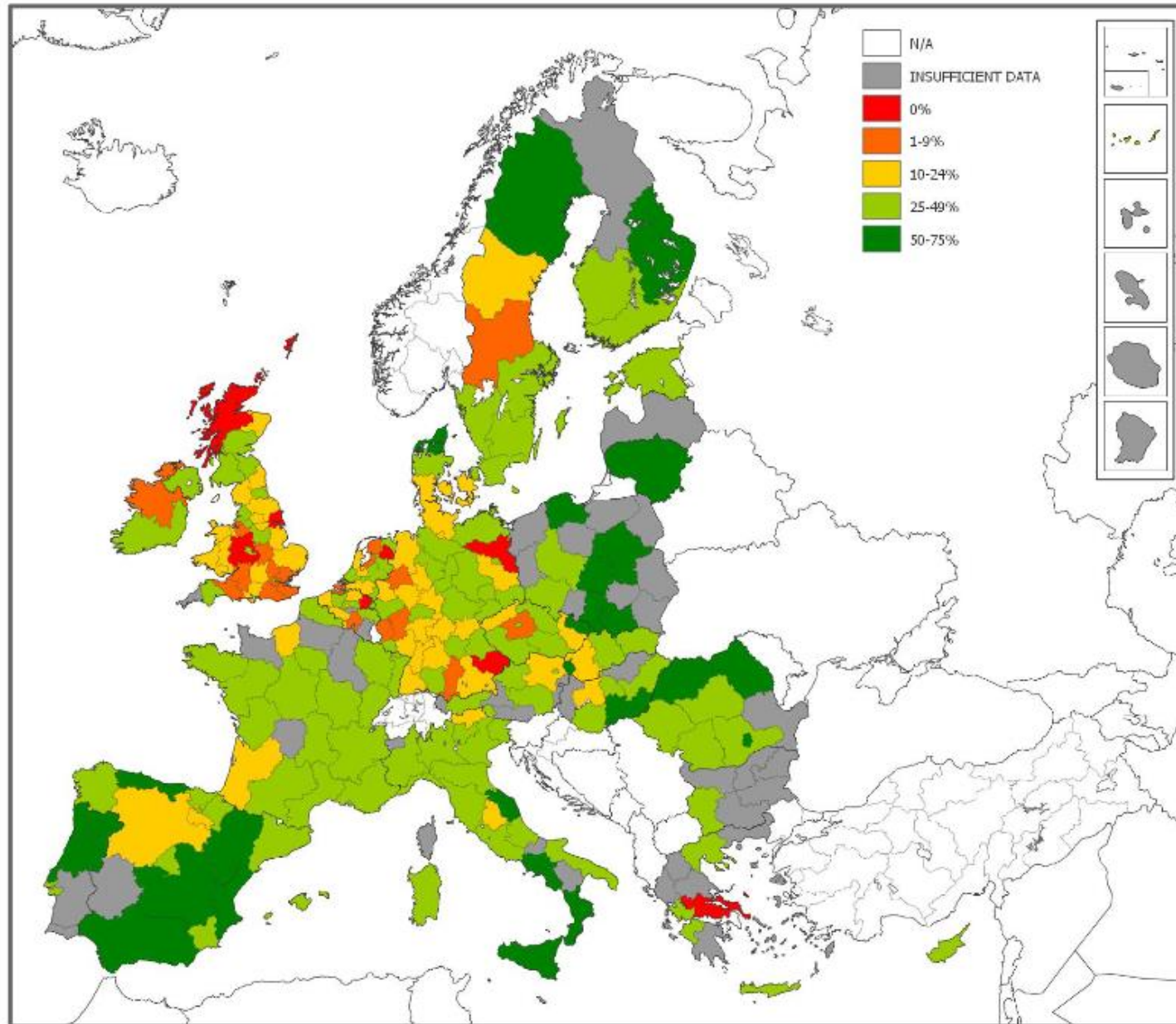
- University R&D collaboration with small and medium-sized enterprises (SMEs)

*“Research cooperation patterns of European SMEs:
geographical distribution of public sector partners
according to Web of Science research publications”*

Alfredo Yegros and Robert Tijssen

CWTS Research Report for the European Commission/DG Enterprise (PRO INNO Europe,
Innovation Union Scoreboard 2011-2012), 2012

Share of public sector research partners of SMEs that are located within the same NUTS2 region



General observations #1

Lack of large-scale information and databases hampers policy-relevant analysis beyond case studies and scattered regional data sources

Existing data sources are not fully utilized: for example, data on research publication patterns is readily available at NUTS-based and distance-based definitions of regions

Detailed quantitative analysis and benchmarking of research-active institutions is possible: for example contributions to (regional) science-innovation ecosystems

General observations #2

Currently available information could be collected and integrated, for EU-wide or global monitoring and benchmarking, via open access EC information platforms (including *U-Multirank*); international (policy) initiatives needed

U-Multirank's range will expand in 2015-2016: more universities; perhaps more performance indicators and more Readymade Rankings (possibly on 'Innovation' or 'Entrepreneurial universities')

U-Multirank will become an independent entity in 2017, which is likely to affect its ambition, focus and content

Thank you for your attention

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