

THE's Interdisciplinary Science Rankings 2024



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Partnership with Times Higher Education



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Interdisciplinary Science Rankings

Preliminary analysis from 

In association with



Introducing the project

- Research is a complex space – as part of the WUR changes we were looking at different ways of measuring progress
- In 2022 we began to explore interdisciplinary research
 - Series of roundtables
 - Data collection
- Initial analysis produced in 2023
- Recommendation to move towards a ranking in 2024

Roundtables

Global – April 2022



THE Innovation and Impact Summit (Stockholm)

Europe – May 2022



THE Europe Universities Summit (Barcelona)

Asia – May 2022



THE Asia Universities Summit (Aichi, Japan)

North America – May 2022



Schmidt Science Fellows Global Meeting (Boston)

Global – June 2022



Virtual

Common issues

Researchers
working across
disciplines

Scope of
interdisciplinary
research

Recruitment

Culture

Demand from
students and
faculties

Facilities

Solving practical
and systemic
problems

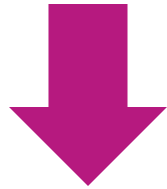
Funding / Grants

Research
outputs

Rewards and
recognition –
promotions and
tenure

THE Rankings

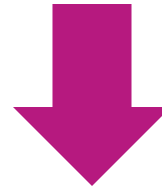
TEACHING



Focus: student satisfaction, employer reputation, graduation rate + more

Participation rules: ranking specific

RESEARCH



Focus: research output, research quality, research collaboration, reputation + more

Participation rules: 1,000+ publications over 5 years, teach undergraduates across a range of subjects

IMPACT & SUSTAINABILITY



Focus: research, teaching, stewardship and outreach against the UN's 17 Sustainable Development Goals

Participation rules: all UG or PG higher education institutions

What will the Ranking do?

- Provide insight into excellence
- Encourage improvement
- Explore how academics feel about interdisciplinarity
- Determine the variables that are measurable

Why just Science?

- Initial focus is interdisciplinarity within science
 - Focus of Schmidt Foundation
 - Practical challenges of bibliometric measurement across disciplines

High Level Methodology for the Rankings



What data are we asking for?



Interdisciplinary Science Ranking (ISR)

Draft metrics

Pillar	Metric Name	Source
Input	Proportion of research funding dedicated to ISR	Portal
Input	Amount of research funding from industry	Portal
Input	Recruitment of ISR researchers	Ads / Portal
Process	Does your institution encourage ISR work	Survey
Process	Are younger academics able to explore ISR	Survey
Process	Is ISR rewarded in promotion	Survey
Process	Does your university have measures of interdisciplinary success?	Portal
Process	Does your university provide specific physical facilities for interdisciplinary teams?	Portal
Process	Does your university provide specific administrative support for interdisciplinary teams?	Portal
Process	Does you have a tenure a promotion system in place that recognizes interdisciplinary research?	Portal
Output	Amount of ISR	Bibliometric
Output	Proportion of ISR	Bibliometric
Output	Utility of ISR - out of discipline citation	Bibliometric
Output	Quality of ISR - FWCI or network	Bibliometric
Output	Reputation of support for interdisciplinary teams	Survey
Output	Does you have a tenure or promotion system in place that recognizes interdisciplinary research?	Survey

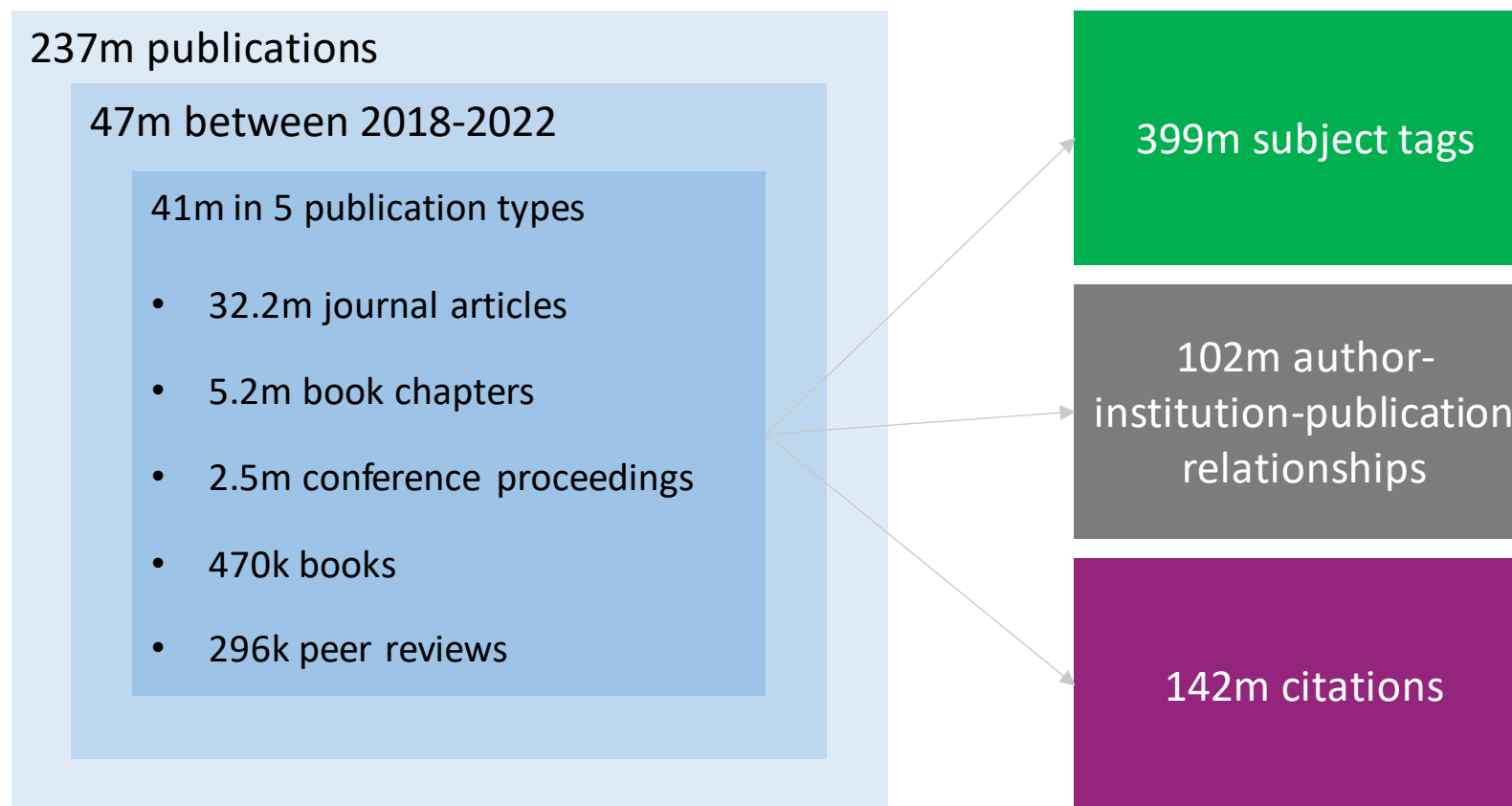
Survey

- Survey is targeted at academics working in science
- There are two parts to the survey
 - Questions focusing on your own institution
 - General awareness of successful interdisciplinary universities
- The survey is distributed by institutions
 - THE provides a link that takes academics to a survey page

Bibliometric

Phase 1: OpenAlex

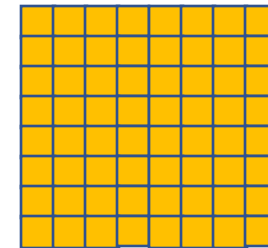
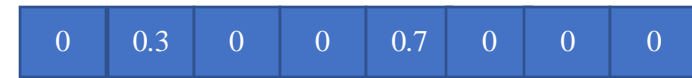
Phase 2: OpenAlex or Elsevier Scopus



Identifying ISR publications

- In OpenAlex every publication is tagged with a set of subjects and relevance scores e.g. {'Computer Science': 0.3, 'Biology': 0.7}
- We can format these scores into a vector S
- Based on the co-occurrence frequency, we can determine the distance between subjects. Let D be the distance matrix
- The ISR score of the document is

$$(S^{\frac{1}{2}})^T D S^{\frac{1}{2}}$$
- A publication is considered ISR if its ISR score is in the top 25% percentile of all eligible publications



Final decisions on metrics

- We have a good insight into the data that will be provided following last year's collection
- There are data that may prove difficult for universities to provide
- We may choose not to use some metrics in the final rankings
- We also expect to adjust the ranking over the first few years, based on feedback from institutions

Data insights 2023



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Insights from 2023 data

- Strong appetite in understanding from institutions
- However, most institutions do not systematically record their effort
 - More importance needs to be placed on recruitment and recognition
- In terms of ISR research outputs, Hong Kong and Singapore are leading the way
- China and India focus heavily on ISR
- Traditional research hubs such as US, UK, Canada and Australia less so

University provided data 2023

1169 institutions submitted Quantitative data

629 institutions submitted non-null data

Research income dedicated to ISR
521 provided data
108 didn't (17%)

Job ads mentioning ISR
537 provided data
92 didn't (14%)

Additional data such as research income, industry income, academic and research staff number reused from World University Rankings submissions

761 institutions submitted Qualitative data

710 answered yes to at least one question

ISR Admin Support

96 said no (14%)

ISR Measure of Success

216 said no (30%)

ISR Physical Facilities

60 said no (8%)

ISR Tenure or Promotion

270 said no (38%)

Survey

General Survey - Reputation

14,335
respondents



30,633 votes



3637 Institutions



Institution Specific Questions

7,750 unique institutions

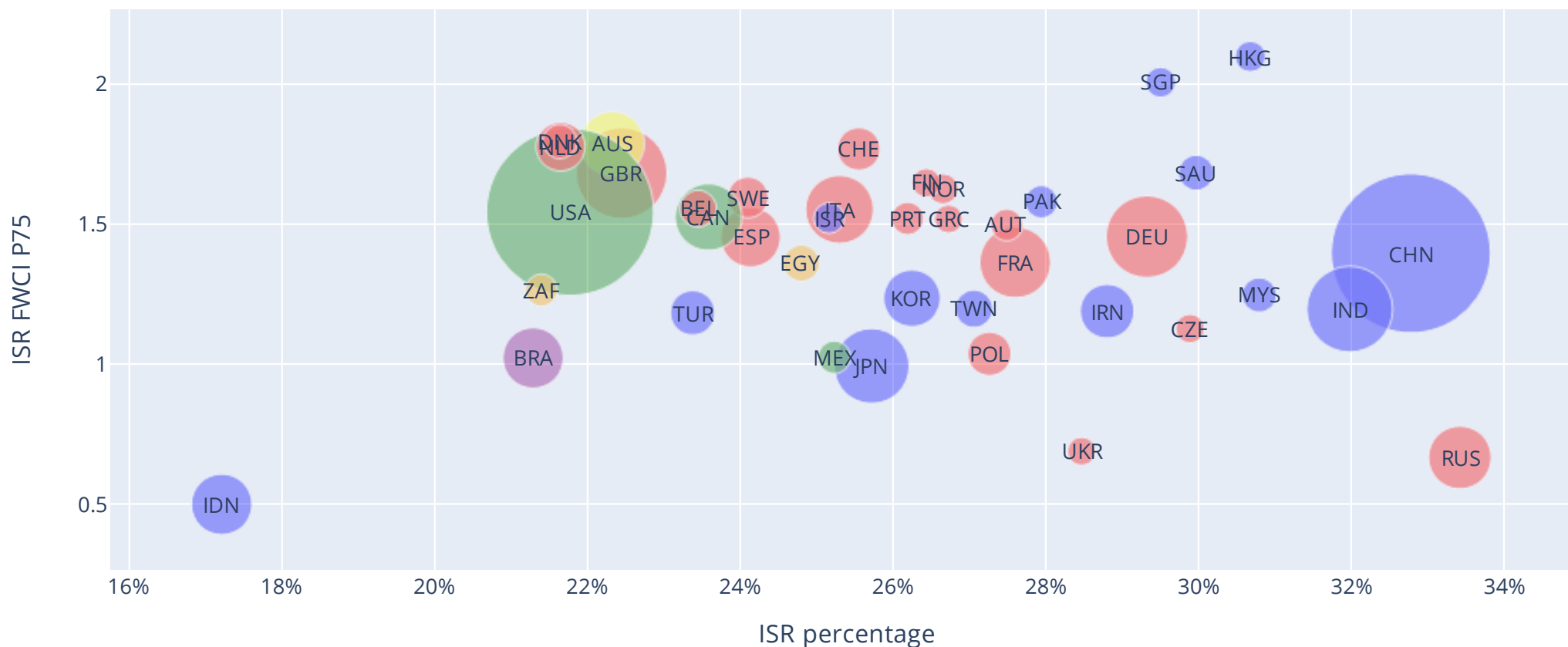
24 institution has ≥ 50
responses

What can we learn from the survey?

	Global	National	Institution
My own research is interdisciplinary	7.7	7.7	7.7
I would like to be able to do more interdisciplinary work	7.9	7.5	7.0
In my institution interdisciplinary research is more team based than individual based (10=team, 0=individual)	6.2	5.9	5.6
My institution has specific administrative support for people working in an interdisciplinary way	4.5	4.1	3.3
My institution encourages interdisciplinary research	6.8	6.6	6.0
My institution supports early career researchers to explore interdisciplinary research	5.7	5.5	5.0
My institution rewards interdisciplinary research when making promotion decisions	4.8	4.5	4.2
My institution encourages interdisciplinary research between science subjects	6.4	6.1	5.8
My institution supports early career researchers to explore interdisciplinary research between science subjects	5.7	5.3	4.9
My institution rewards interdisciplinary research between science subjects when making promotion decisions	4.9	4.5	4.4

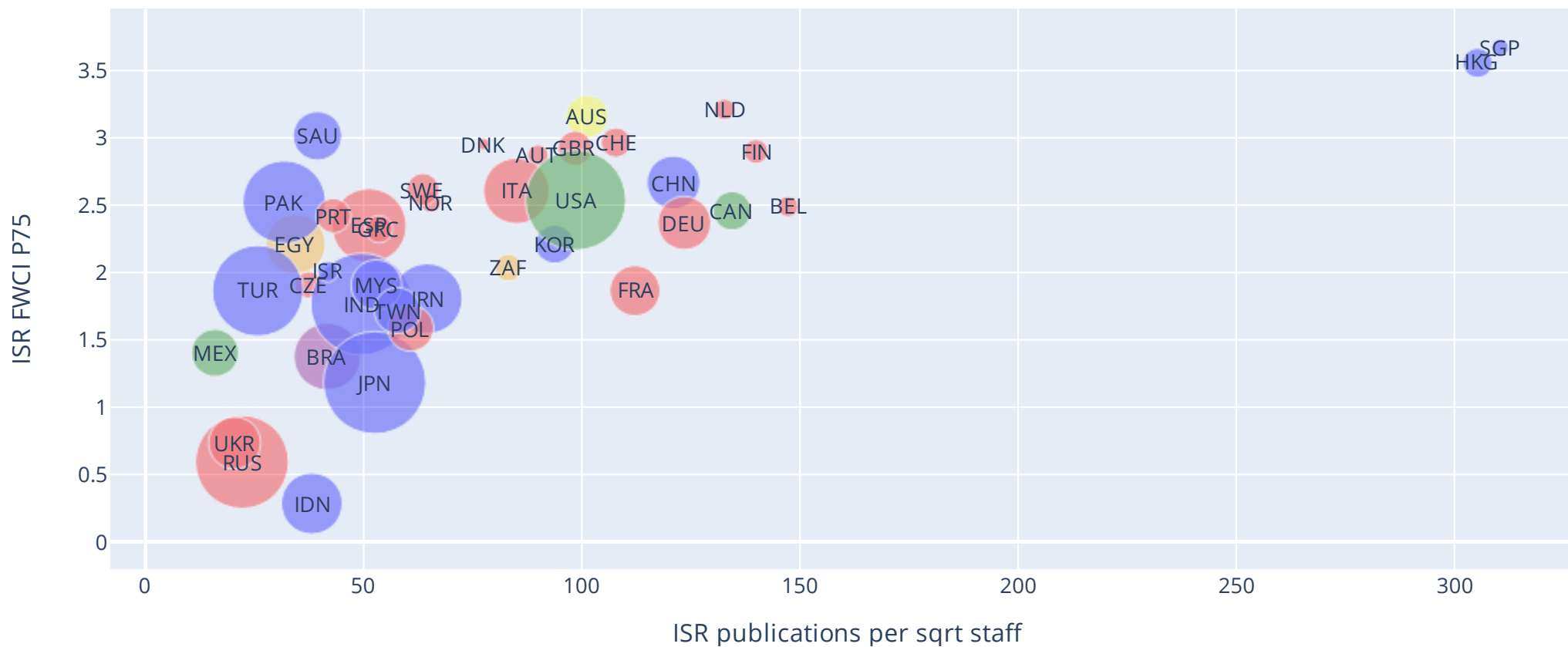
Bibliometrics: Quality and Focus

ISR quality vs. ISR percentage



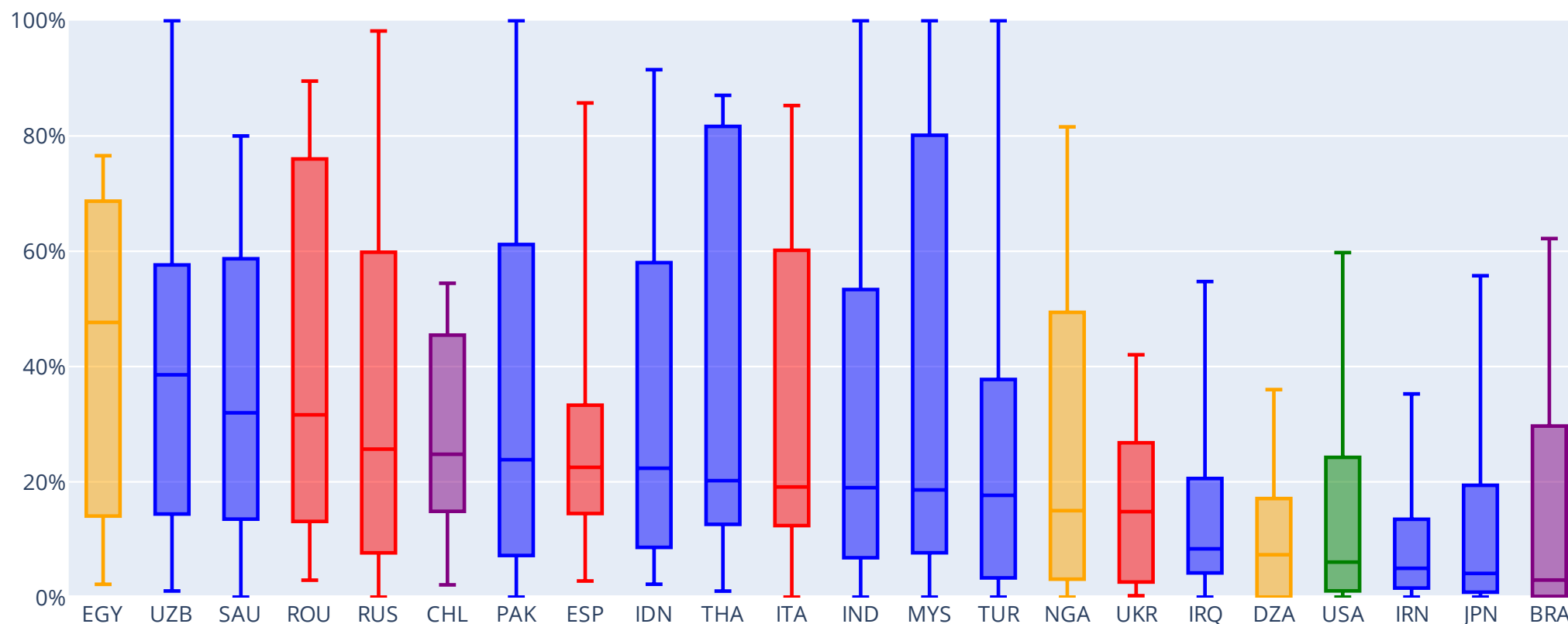
Bibliometrics: Quality and Productivity

ISR quality vs. ISR productivity



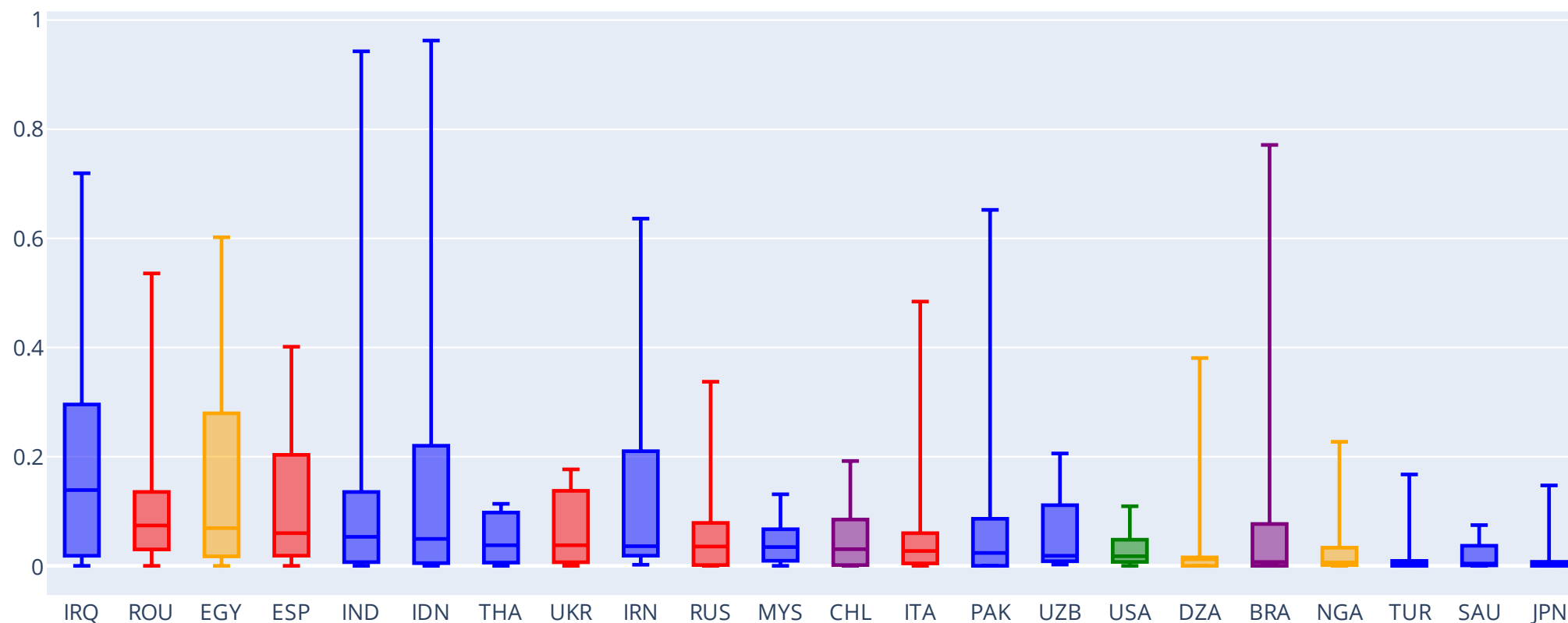
Finance: ISR Research Income

Proportion of research income dedicated to ISR



Careers: Interdisciplinary Adverts

Number of ISR ads per staff



Key Recommendations

- More dedicated policy processes to enhance ISR, including physical facilities, administrative support, and staff incentives such as promotion.
- More funding for ISR as a percentage of overall research funding.
- Greater visibility for ISR outputs from the Global South, potentially through further collaboration with the Global North, to raise impact and reputation.

The 2024 Rankings



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Interdisciplinary Science Ranking (ISR)

Release Date

- November 2024

Coverage

- Research focused institutions (typically WUR participants)

Known issues

- Challenges around data collection – new data not previously collected

Methodology

- Broad methodology (data to be collected) established. Final metrics and percentages to be established.

Insights

- Feedback to universities around success and areas of improvement.

ISR Timeline

- Academic Survey Feb – May 2024
 - Survey is distributed directly by institutions
 - To participate <https://www.timeshighereducation.com/content/interdisciplinary-science-rankings-participation>
- Data Collection Jan – Mar 2024 (along with WUR)
- Ranking Production – Summer 2024
- Ranking Launch – Nov 2024

Q&A



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