



World
University
Rankings 2024

THE 2024 World University Rankings Data Masterclass – Japan

Billy Wong
Principal Data Scientist
THE
Twitter: @BillyWong_THE



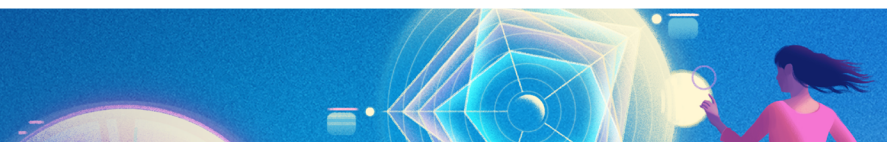
Agenda

World University Rankings 2024

Methodology Review

Japan Trends and Analyses

How to participate



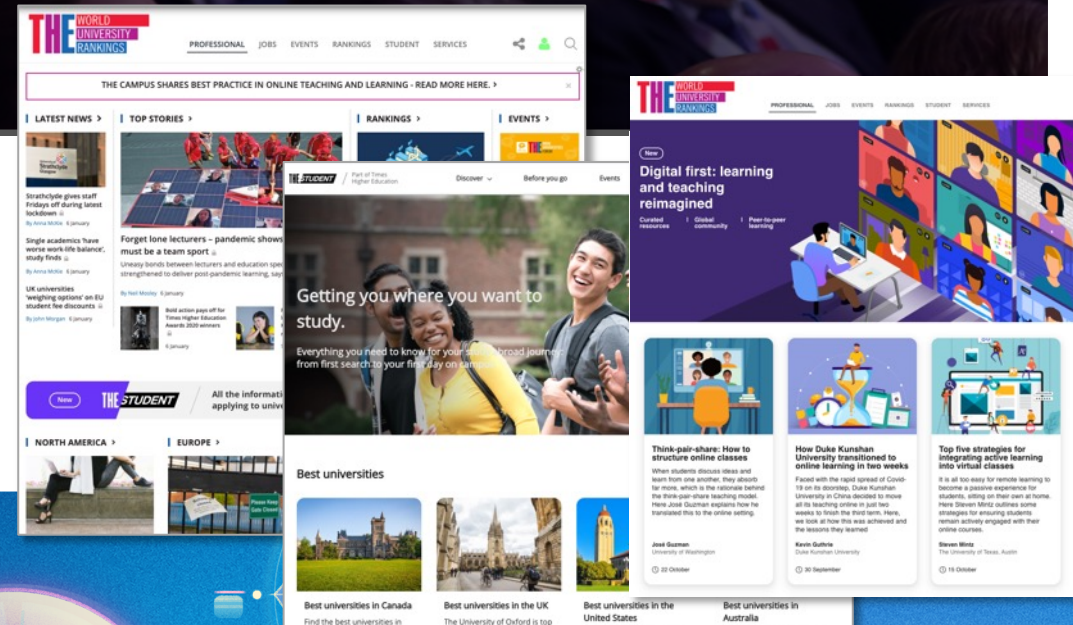
50+ Years of Insights

To help **universities** understand their position against their mission.
To help **students** find and access the university best suited to their abilities and aspirations.
To help **higher education** deliver transformational teaching, research and innovation.

1971

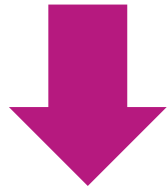


2023



Our Rankings

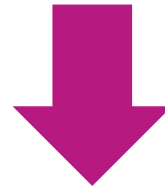
TEACHING



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

Participation rules: country 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

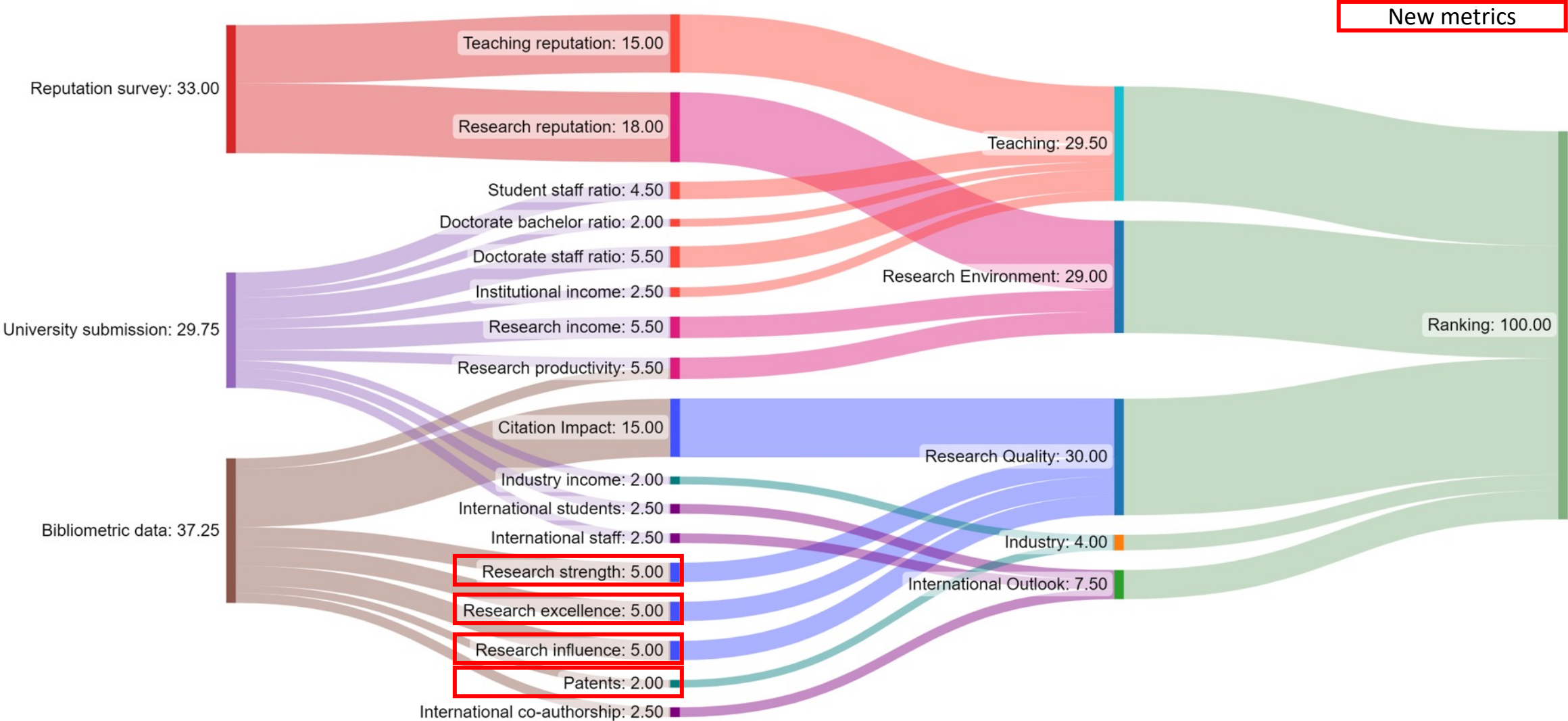


Focus: research, teaching, stewardship and outreach against the UN's 17 Sustainable Development Goals

Participation rules: all UG or PG higher education institutions



Methodology



The world's biggest university ranking

Universities

The world's biggest university ranking

Universities submitted data

2,673

Number of countries represented

127

Bibliometrics

In partnership with **ELSEVIER**

Research papers

16.5m

Citations

134m

Universities Data

The world's largest data gathering exercise from universities

Data values

411,789

Data queries resolved

34,455

Academic Survey

The world's largest academic survey

Respondents

68,402

Votes

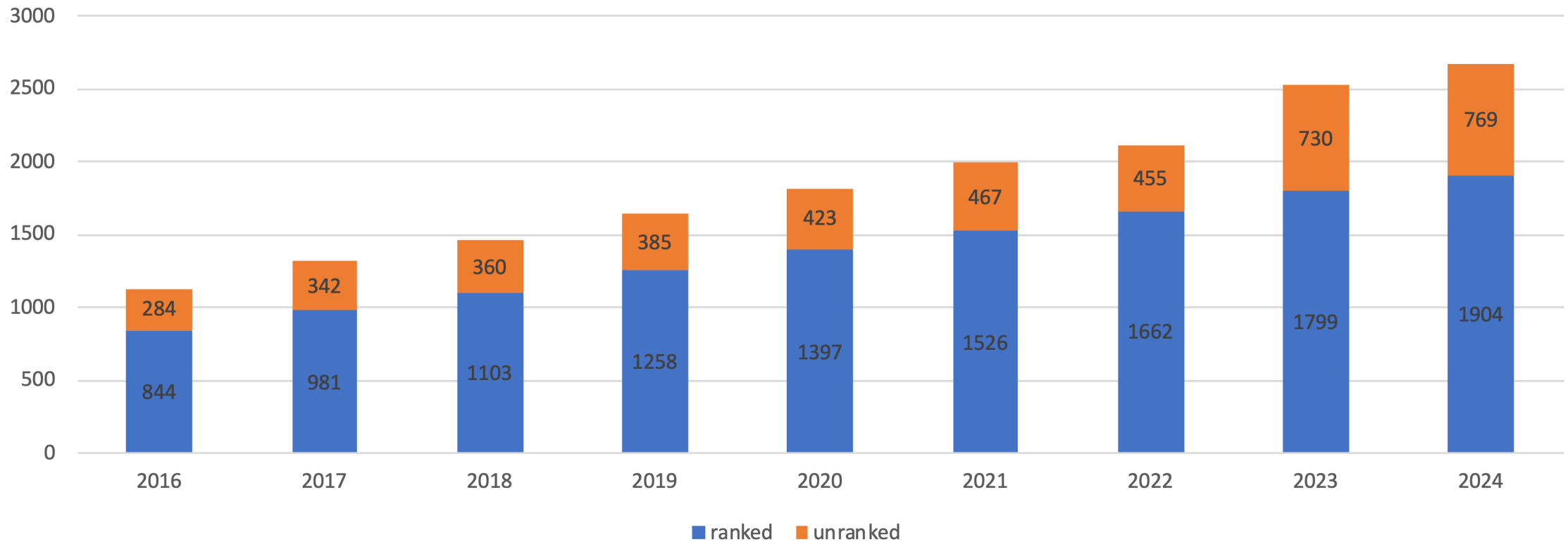
944,509

Countries

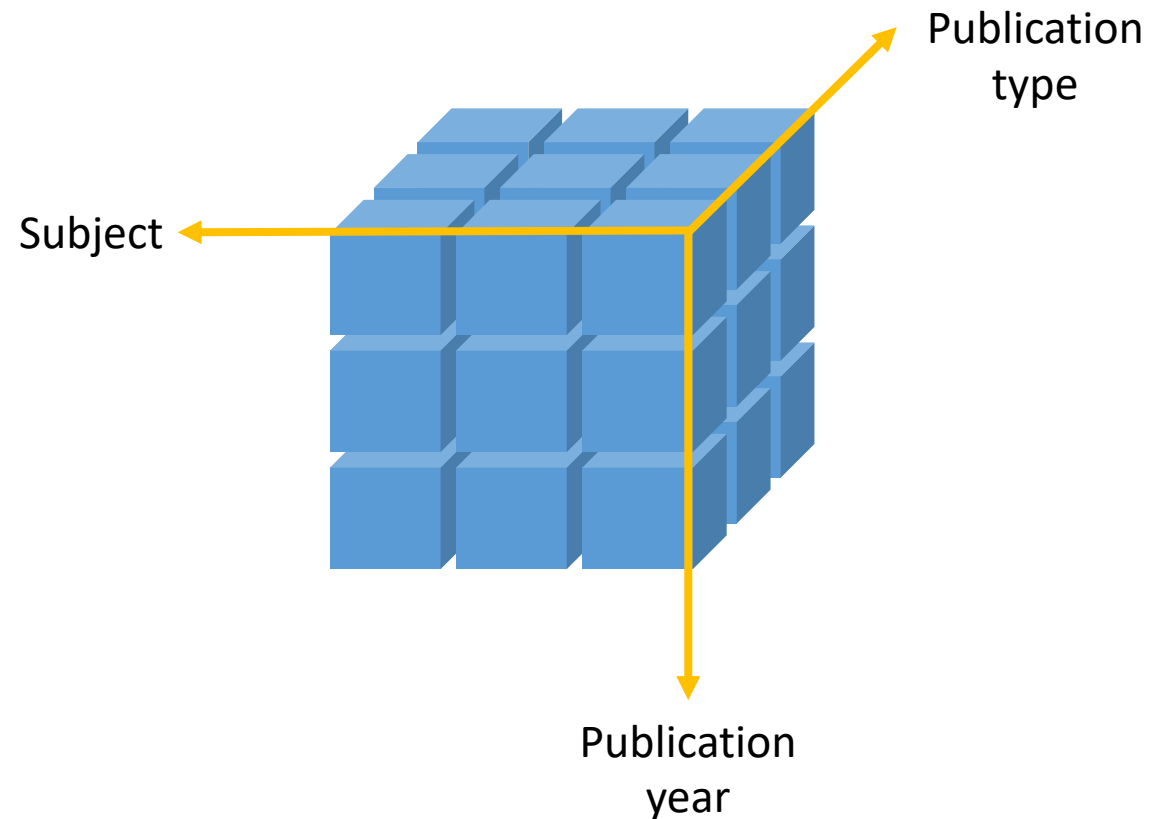
166

20th Anniversary of THE World University Rankings

Number of universities which submitted data to THE World University Rankings



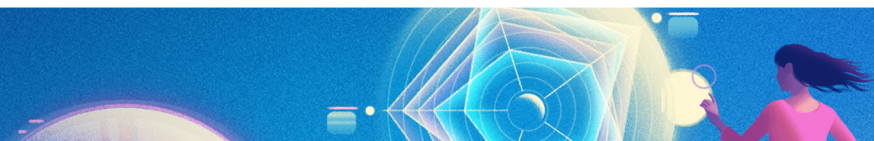
What is Field Weighted Citation Impact?



Let's say I published a journal article in 2019 on artificial intelligence, and it received 6 citations so far...

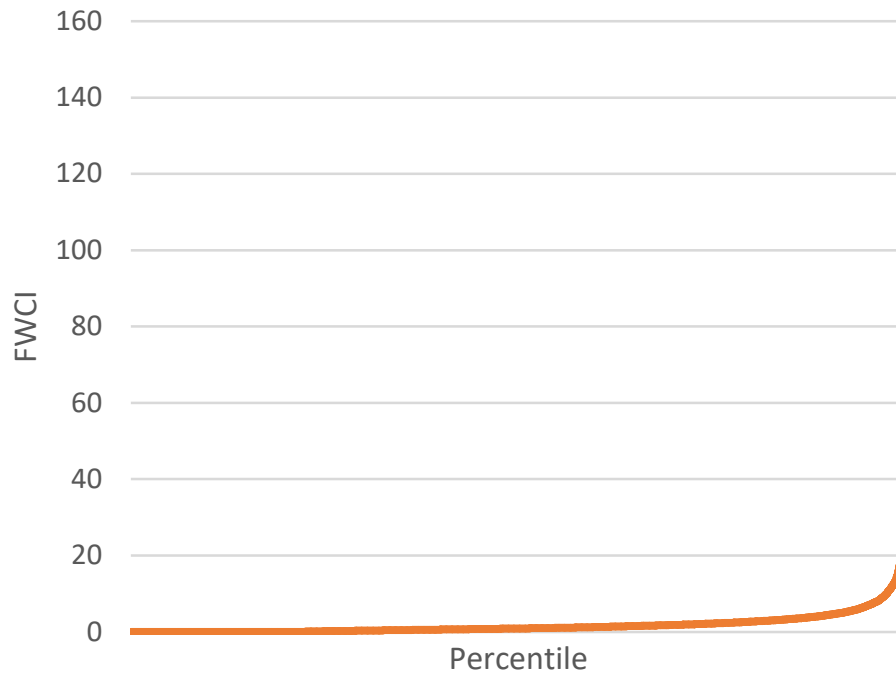
...and the average number of citations received by publications of the same type, same year and same subject is 2...

...then the FWCI of this publication is $6/2 = 3$

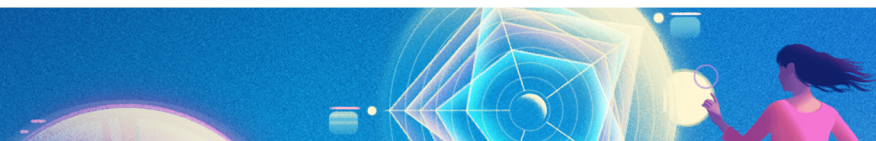
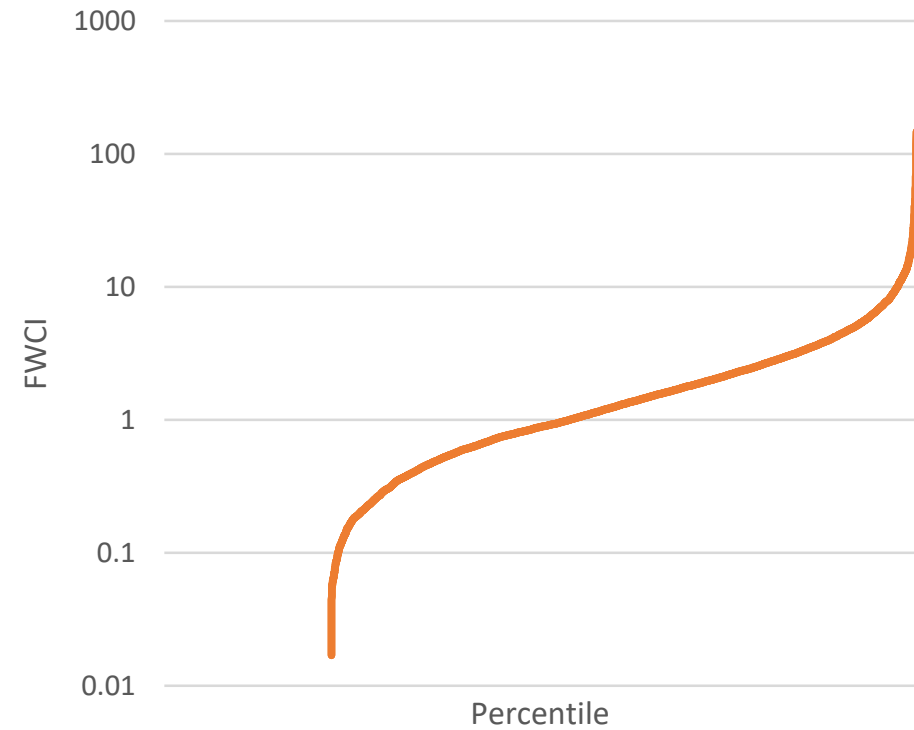


What about FWCI of an author or an institution?

FWCI of a tech oriented university in East Asia

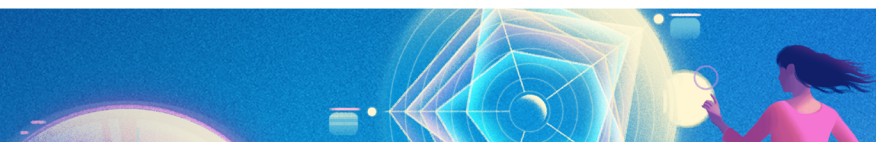
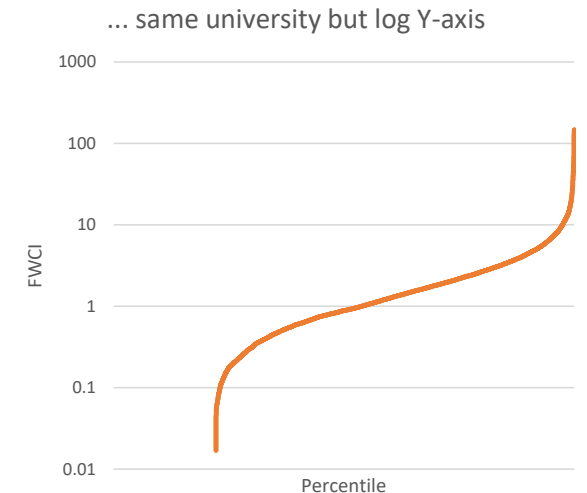


... same university but log Y-axis



THE World University Rankings Research Quality Metrics

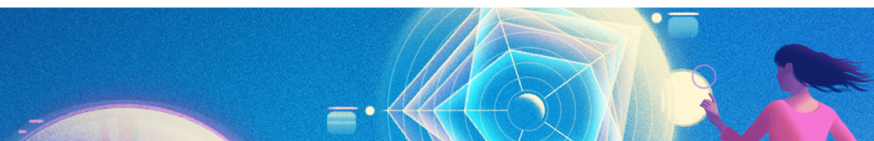
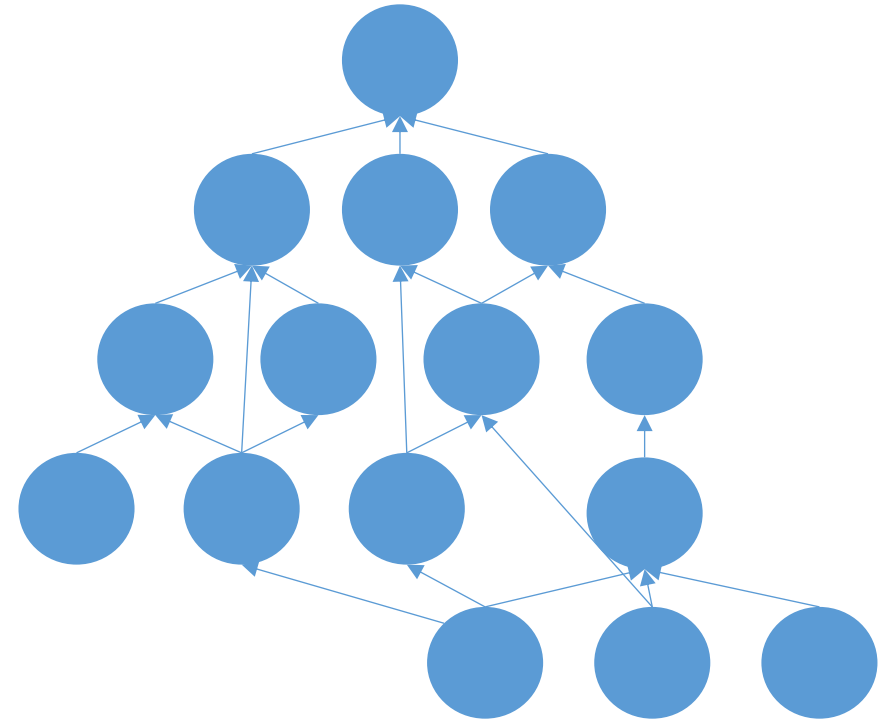
- Citation Impact – Mean FWCI of an institution’s output, but with tweaks
 - Kilo-author papers
 - Country normalisation
- Research Strength – 75th percentile FWCI of an institution’s output
- Research Excellence – Number of papers in top 10 percent by FWCI
- Research Influence – Different from others research quality metrics
 - Not all citations are created equal
 - Citations from important papers counts more
 - How to define “important papers”?



Intuition of Research Influence

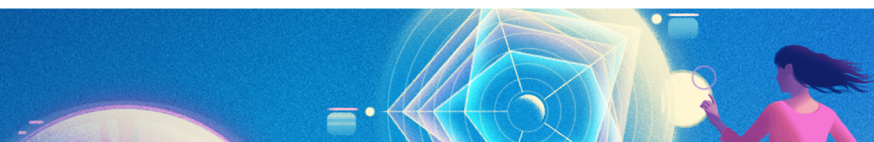
Assume that a person is in a node in the graph and walk randomly along the edges in a graph. Where will he end up?

- Assume the probability of starting at each node is the same
- At each step, there is a probability r that the person is “teleported” to a random node in the graph.
- There is a $1-r$ probability that the person travels along the edges. If the node has w out-edges, then the probability of travelling along any one of those edges is $(1-r)/w$
- After a sufficient number of steps, the probability of being in each node stabilizes. That value indicates the “importance” of the node in the graph
- This is the same algorithm as Google’s PageRank



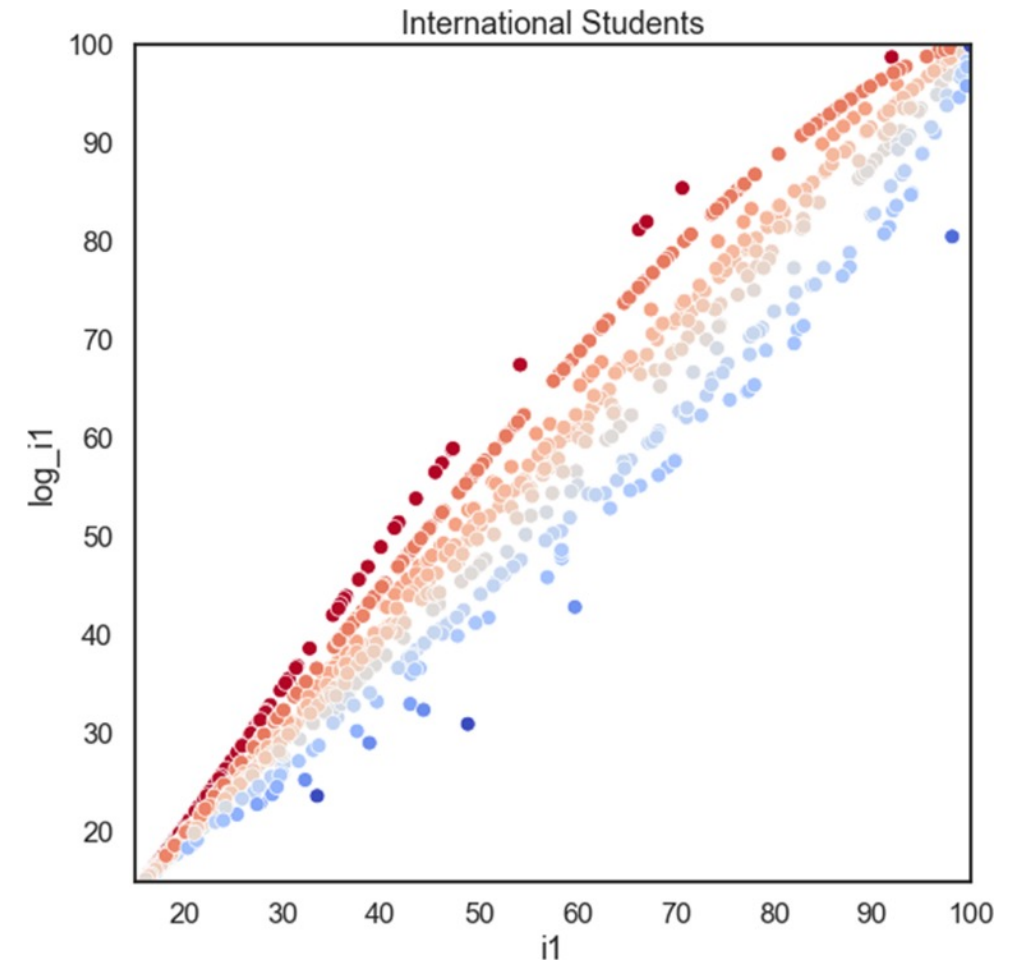
Industry: Patents

- The extent to which universities are supporting their national economies through technology transfer is an area that deserves greater recognition. We will be introducing an additional measure.
- Directly measures research output, specifically how much an institution's research is cited by patents. This is similar to one that we already use within the THE Impact Rankings (in SDG 9: Industry, Innovation and Infrastructure).
- This measure is subject weighted to avoid penalising universities producing research in fields low in patents.
- This is a count of patents, normalised by staff numbers.

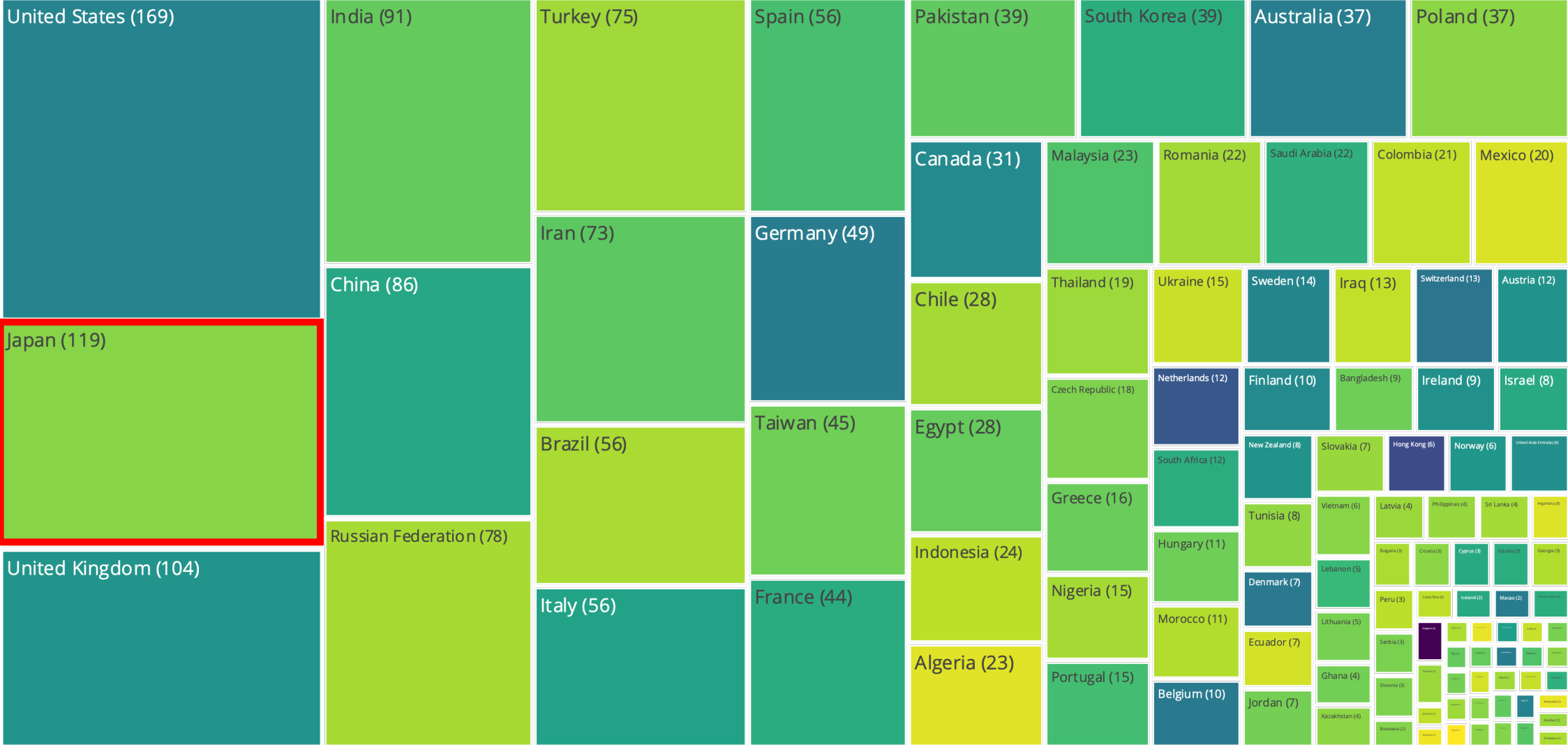


International Outlook

- Large countries had been disadvantaged compared to small countries in our international metrics, in that it is “easier” for staff and students in small countries to work/study abroad.
- The existing metrics is now normalised to account for the populations size:
 - Proportion of international students
 - Proportion of international staff
 - Proportion of publications with at least one co-author from an international institution
- New Studying abroad metric at zero weight

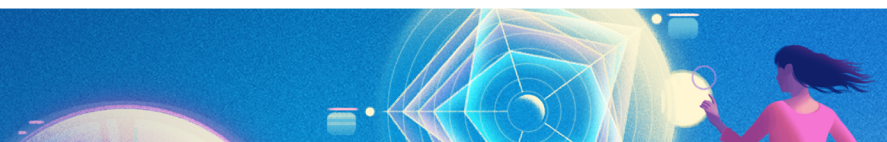


Ranked universities by country/region



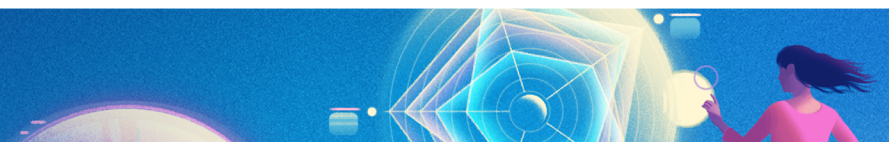
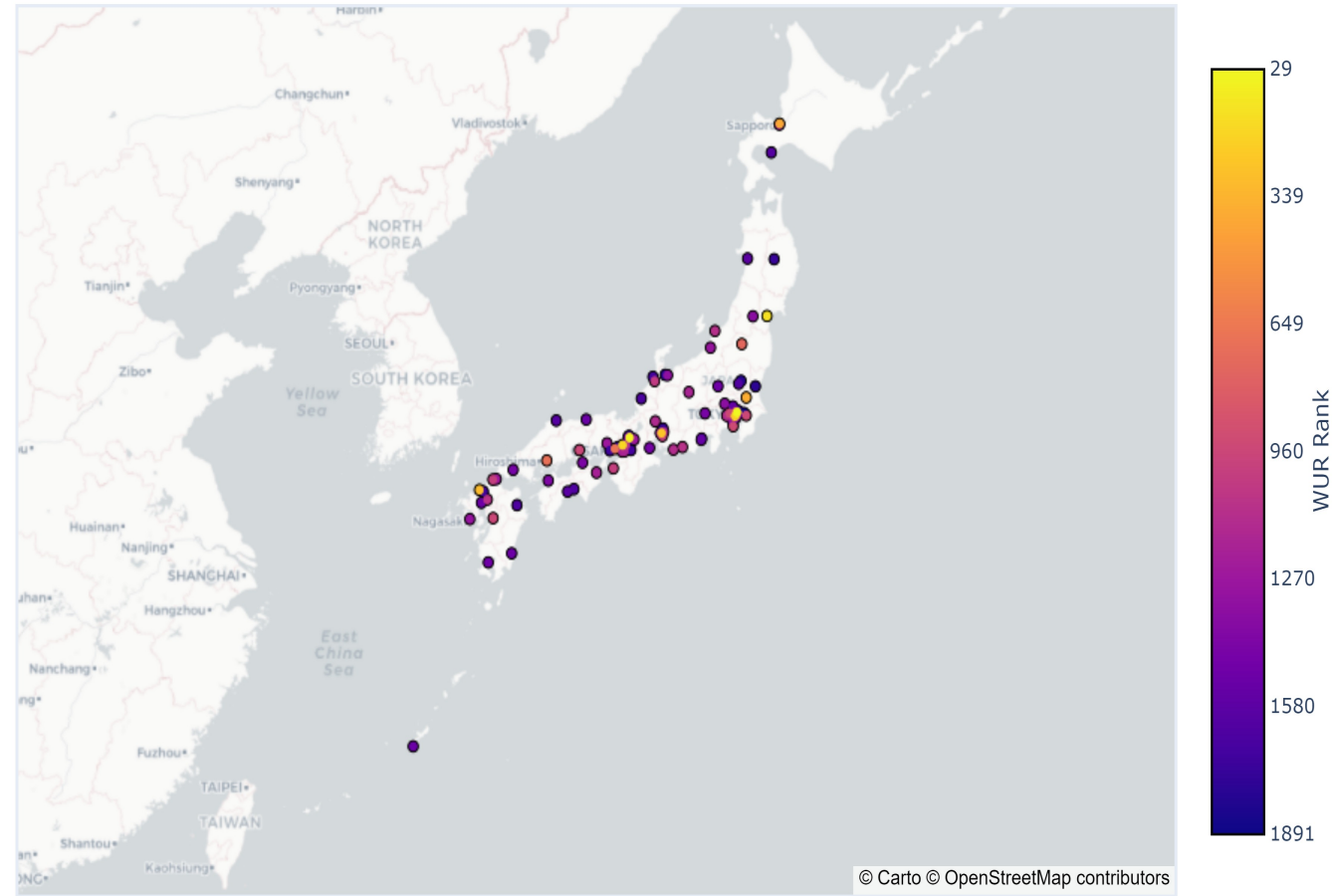
Global Top 10

Institution	Country	This year	Last year
University of Oxford	United Kingdom	1	1
Stanford University	United States	2	=3
Massachusetts Institute of Technology	United States	3	5
Harvard University	United States	4	2
University of Cambridge	United Kingdom	5	=3
Princeton University	United States	6	7
California Institute of Technology	United States	7	6
Imperial College London	United Kingdom	8	10
University of California, Berkeley	United States	9	8
Yale University	United States	10	9



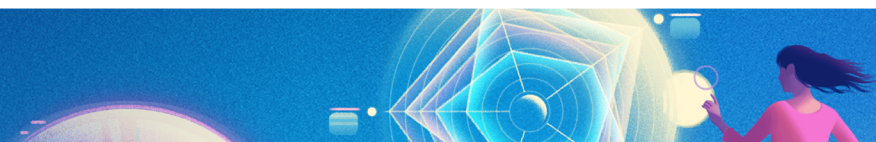
Ranked universities in Japan

There are a total of 119 institutions in Japan ranked in the World University Rankings 2024. The top ranked university in Japan is The University of Tokyo, which is ranked 29th



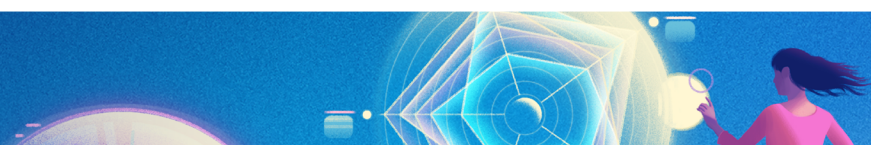
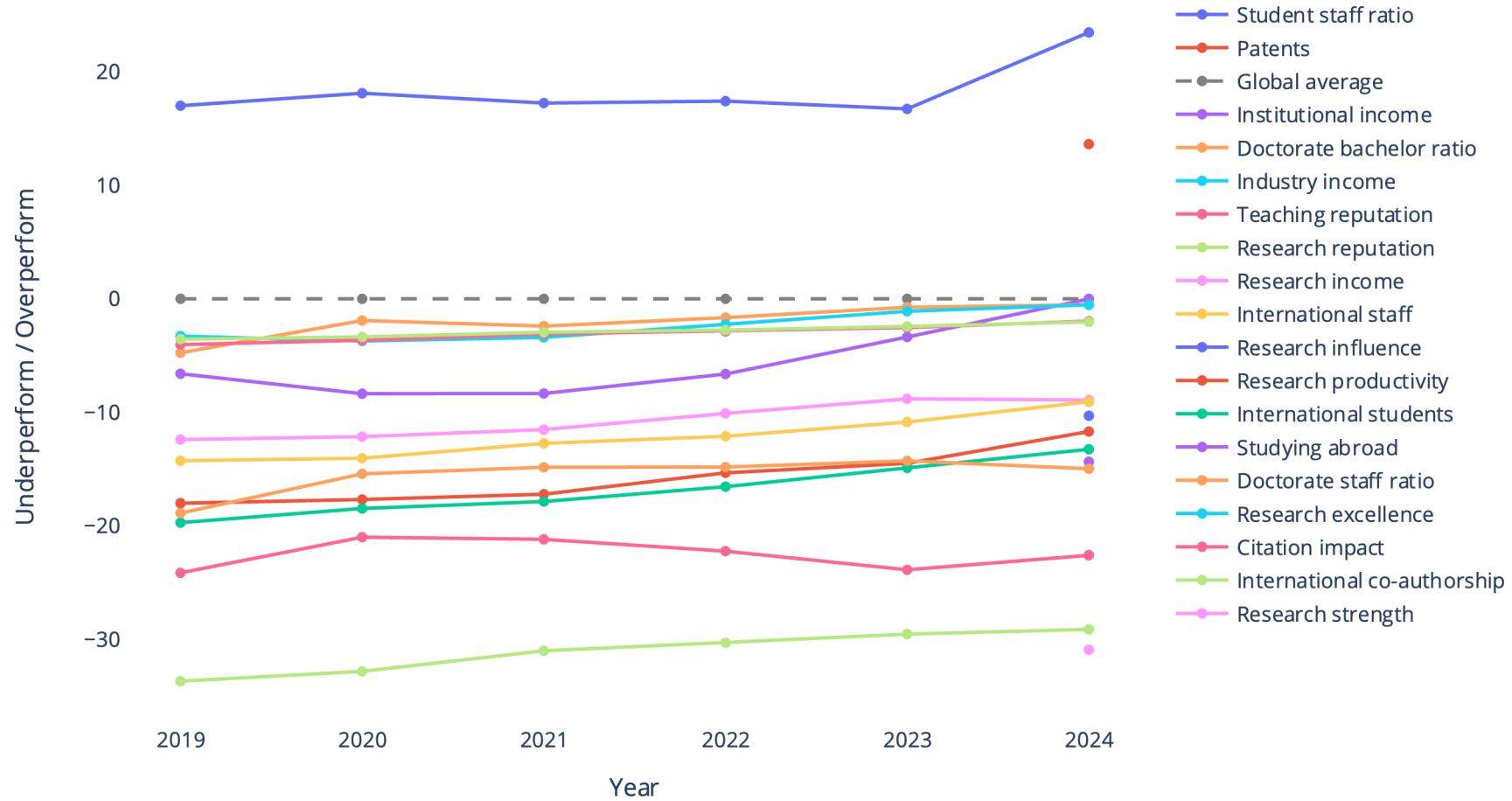
Japan Top 10

Institution	This year	Last year
The University of Tokyo	29	39
Kyoto University	=55	68
Tohoku University	=130	201–250
Osaka University	=175	251–300
Tokyo Institute of Technology	=191	301–350
Nagoya University	201–250	301–350
Kyushu University	301–350	501–600
University of Tsukuba	351–400	501–600
Hokkaido University	351–400	501–600
Tokyo Medical and Dental University (TMDU)	401–500	501–600



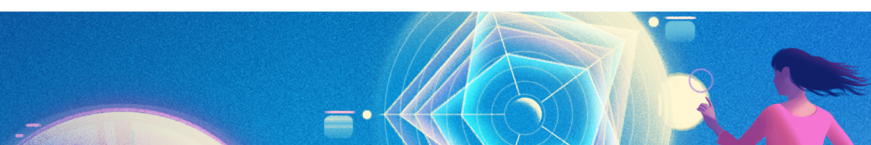
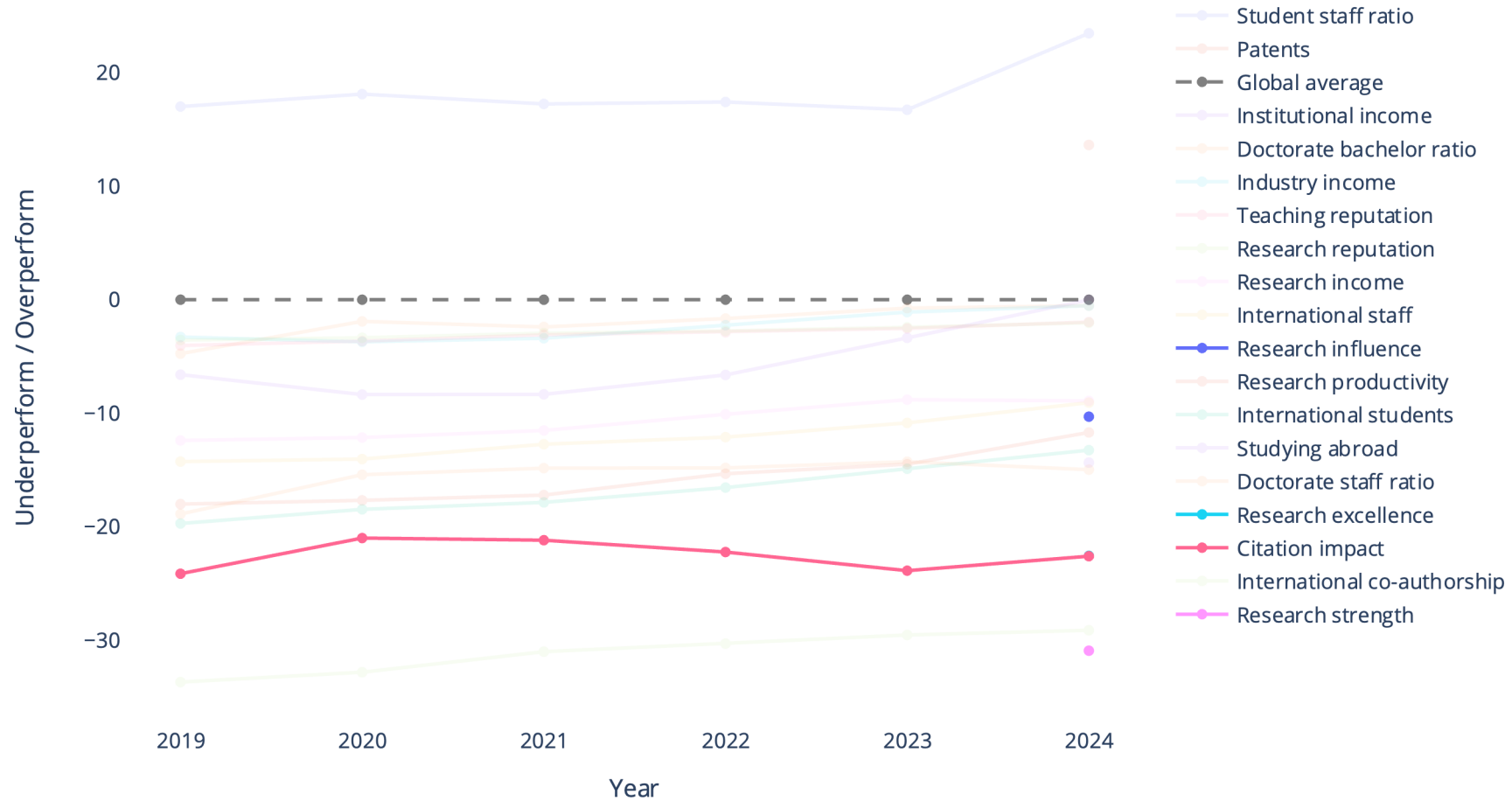
Japan metric trends

Japan - difference from global average



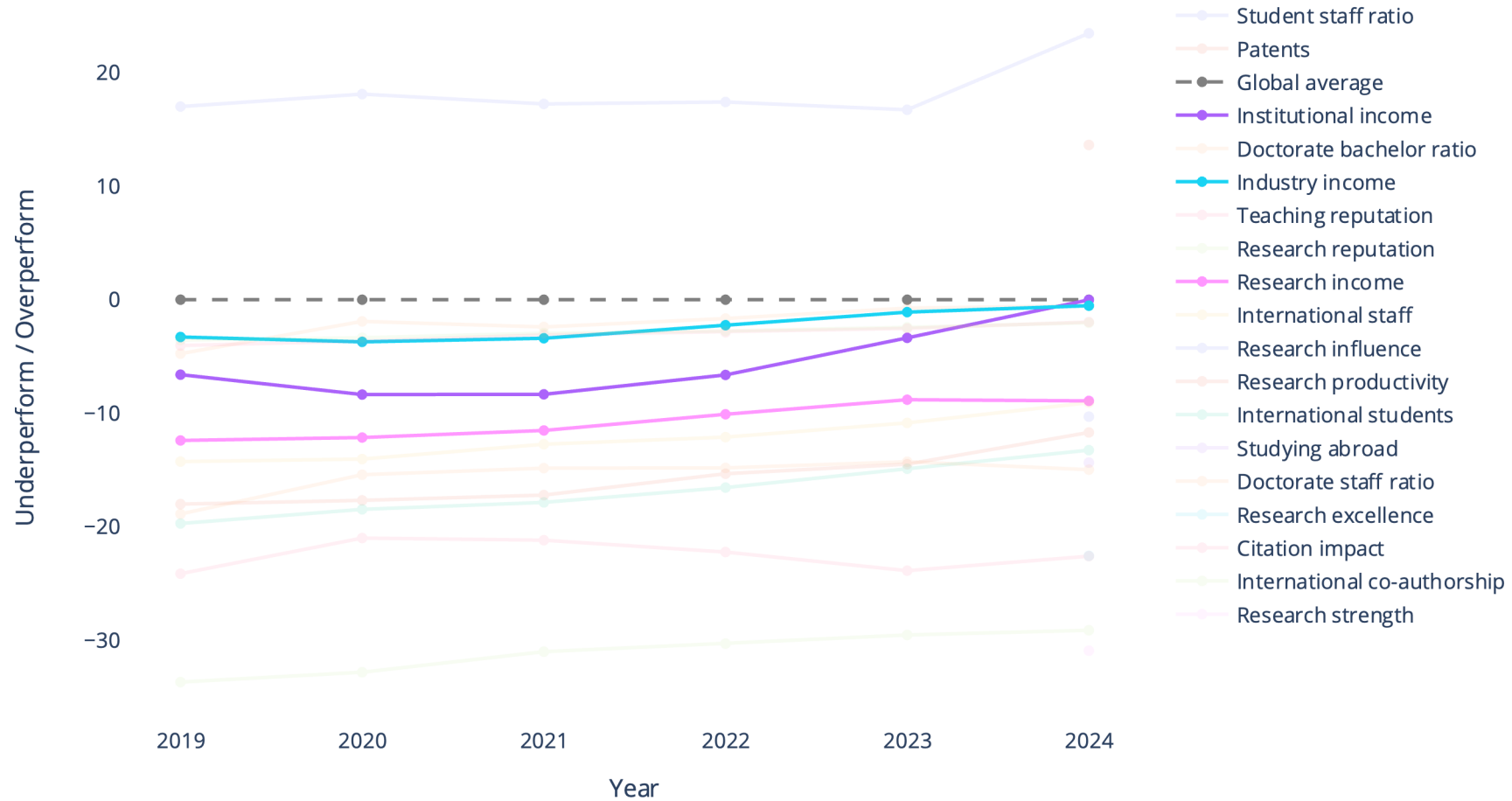
Japan metric trends – Research quality metrics

Japan - difference from global average



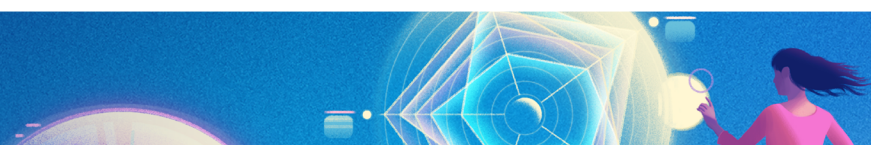
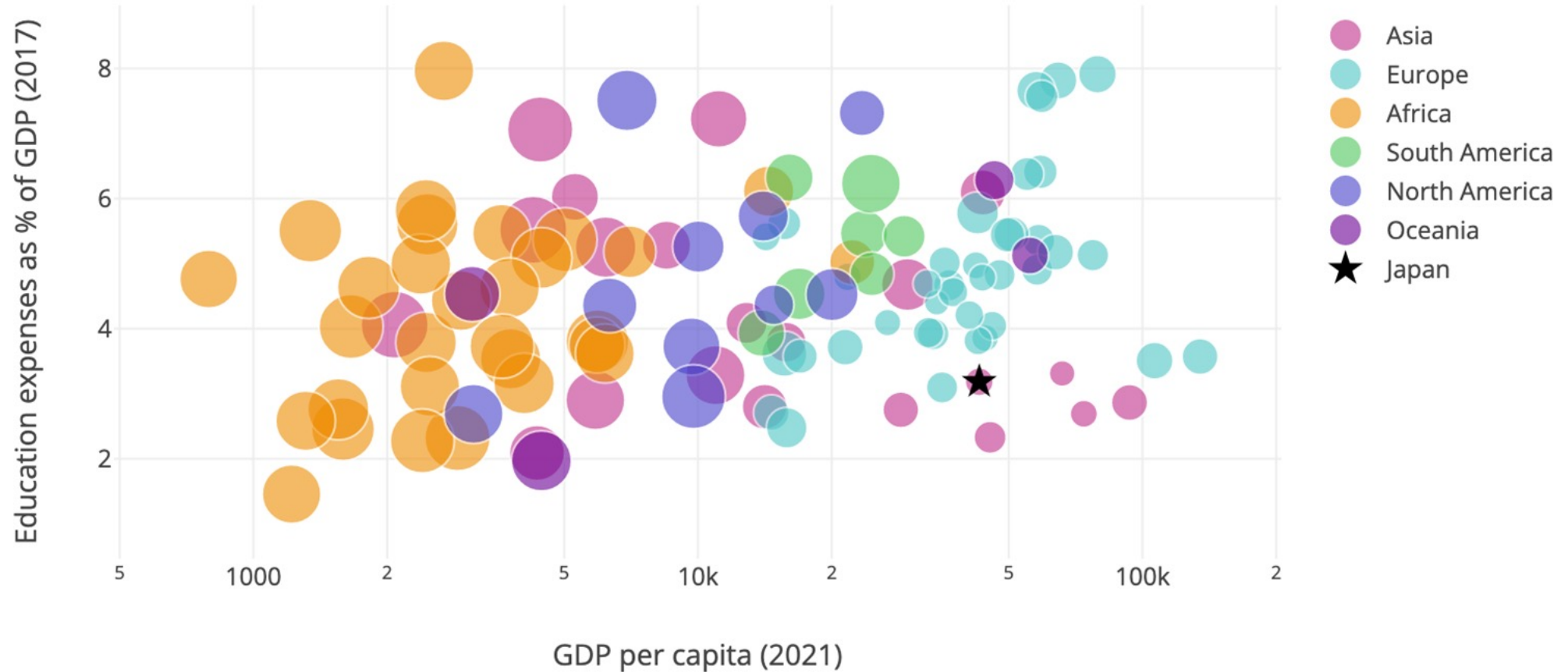
Japan metric trends – Income metrics

Japan - difference from global average



Japan's spending in higher education

% of GDP spent on education, by size of GDP
(size of circle = % of the population that is 15-25yo)



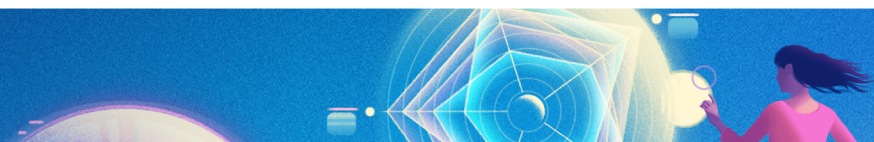
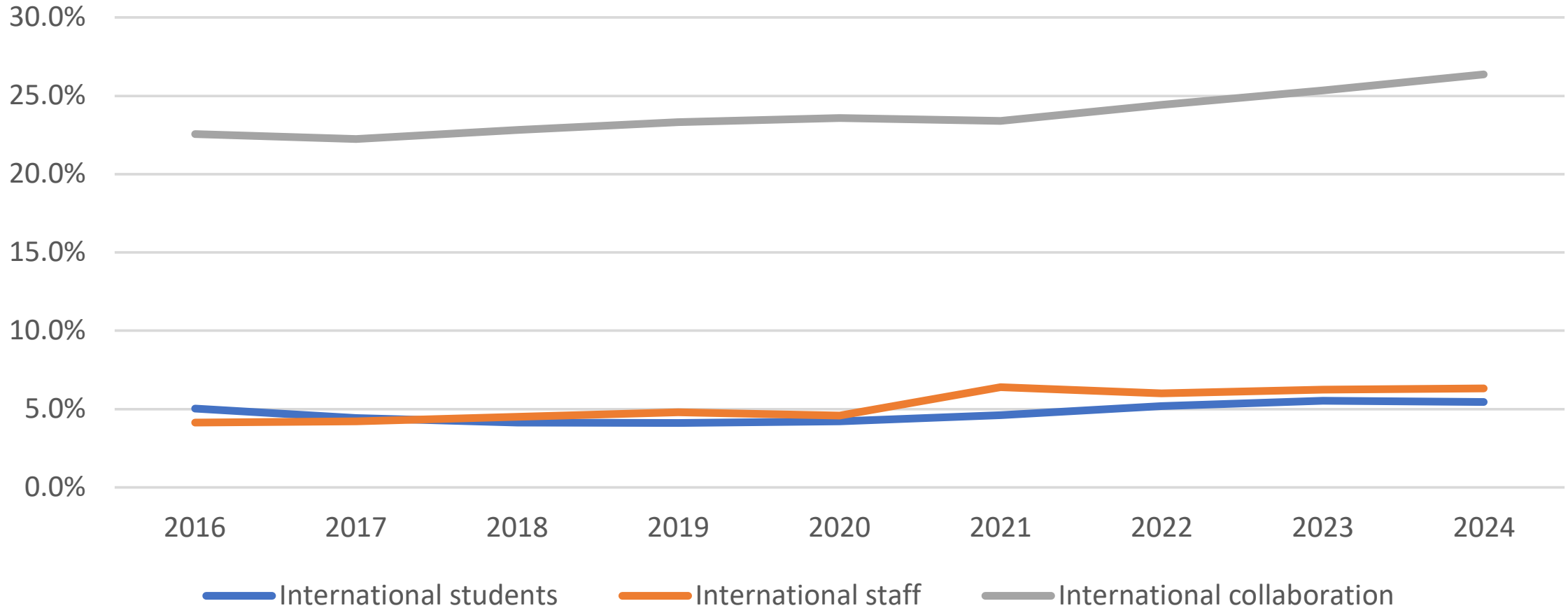
Japan metric trends – International metrics

Japan - difference from global average



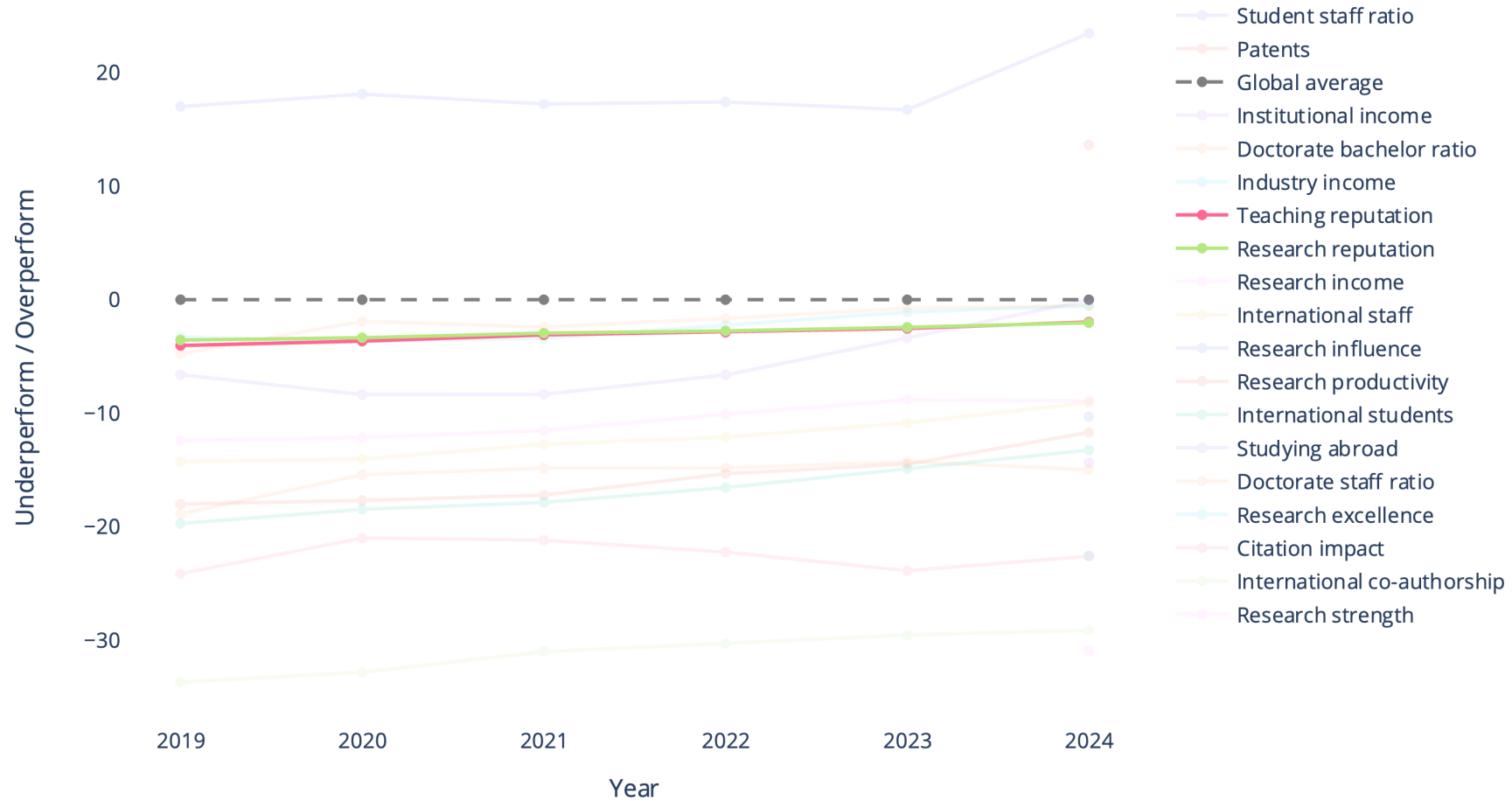
Japan's internationalisation effort in absolute values

Japan's internationalisation effort



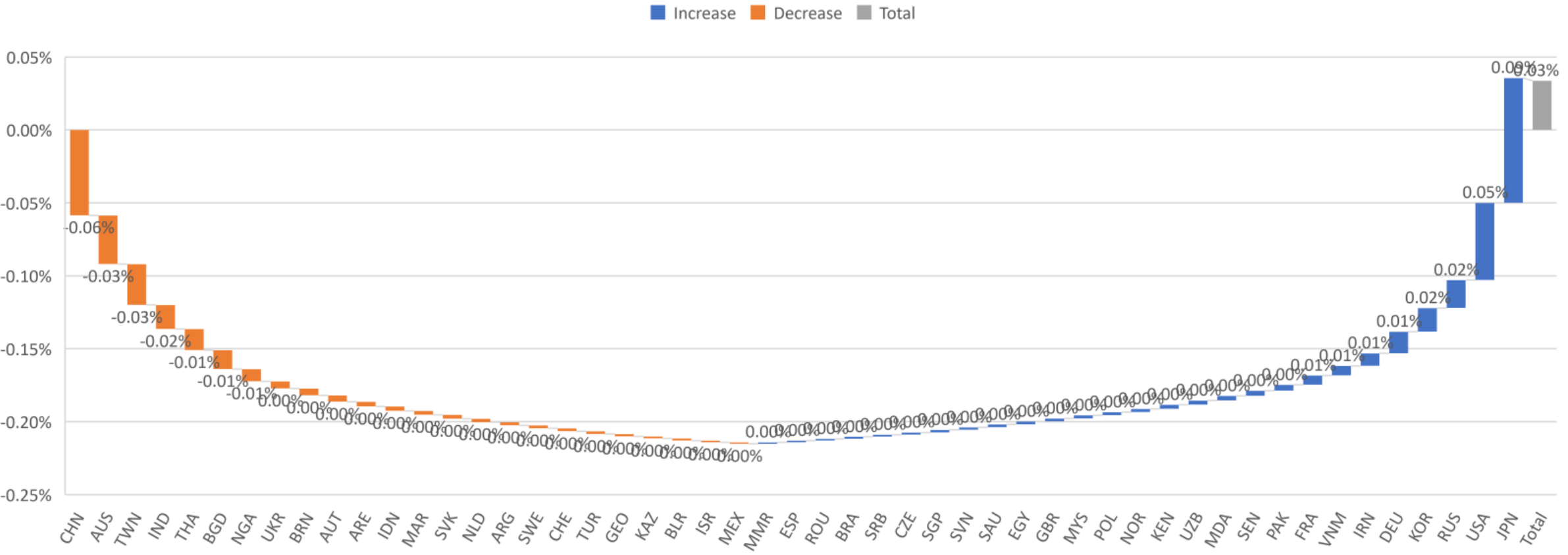
Japan metric trends – Reputation

Japan - difference from global average

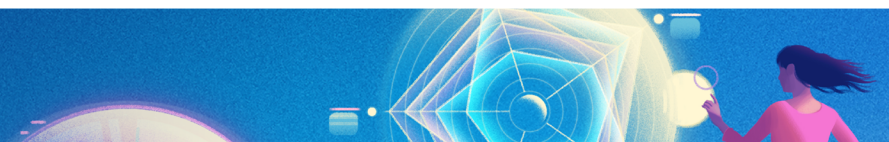
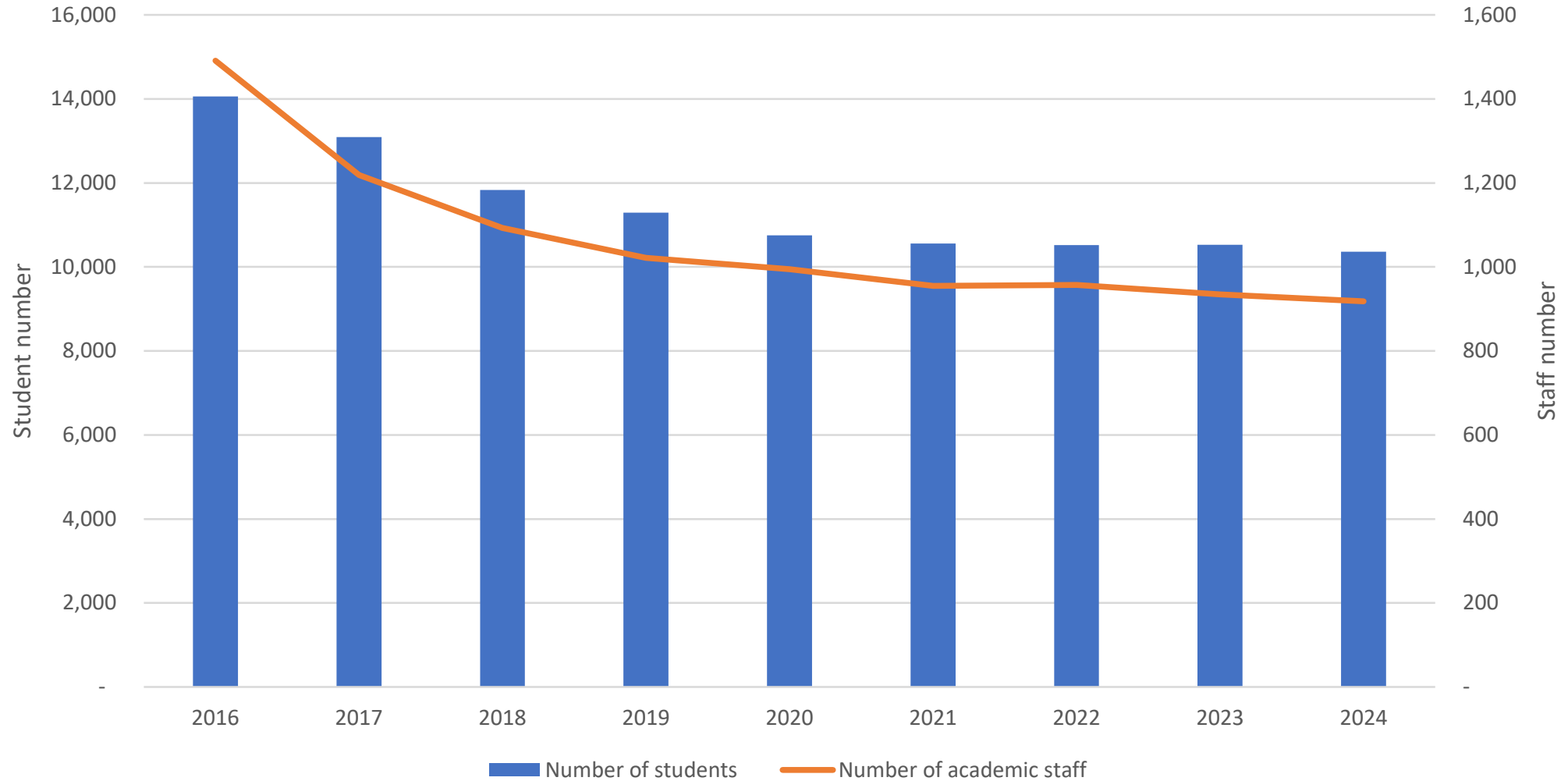


Reputation change by country/region

Japan's share of global reputaiton



Japan's demographic challenge



Comparison

Japan



10,365



918



3.1

World



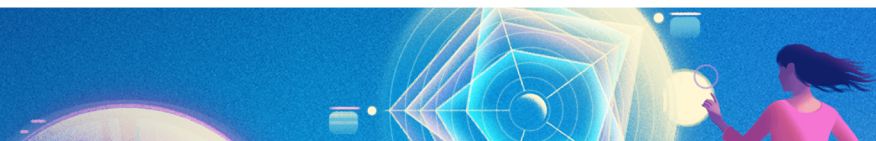
22,192



1,298

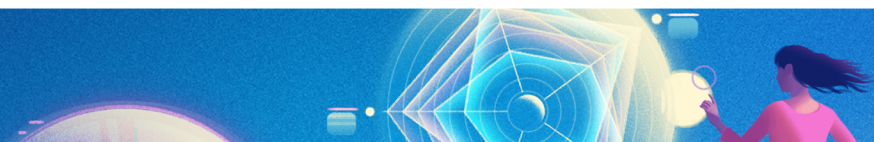


5.4



Conclusions

- New Research quality metrics highlights some strengths in Japan that was previously under-appreciated
 - Research influence best performing Research quality metric
 - However, all Research quality metrics are still below global average
- Funding of Japanese universities is improving but remains below global average
- Further effort need to improve internationalisation. Percentage of international students stagnates at 5%
- Tackling demographic challenges will be key to Japan's future success



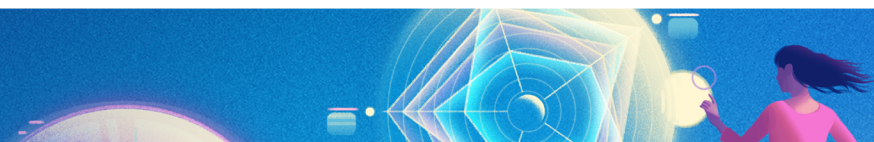
How to participate?



Eligibility Criteria

Participation in THE World University Rankings (or any other THE rankings) is always free of charge. However, there is a set of eligibility criteria

- Must teach at undergraduate level
- Publication requirements
 - At least 1000 publications in 5 years
 - At least 150 publications each year
 - Separate publication requirements for the subject rankings
- Must not be a subject specialist



How to take part

We need your help for the **institutional data**

1. Nominate a Data Provider

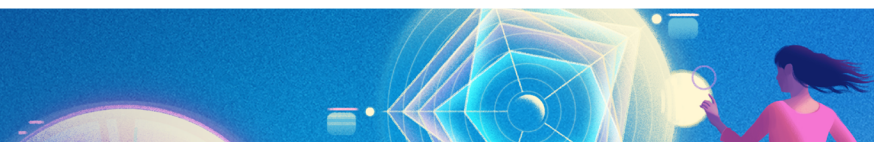
A Data Provider for your institution will need to be nominated.

Please email us at profilerankings@timeshighereducation.com

2. Connect to the Portal

Your Data Provider will receive login details to connect to the Data Collection Portal

The Portal will be open between 8 January and 30 March 2024



Data Collection Portal 1/3



World University Ranking 2022

Complete the stages of the data collection process

THE- Times Higher Education World

Introduction

Institution Profile

Data

Notes

Review, print & submit

Welcome to the *Times Higher Education (THE)* World University Rankings data collection portal.

The secure portal is structured to collect accurate and detailed information to enable us to develop a detailed, multifaceted performance profile of your institution to create the *THE* World University Rankings and related specialist rankings.

Please note that this portal is directly managed by Times Higher Education and is the only source of institutional data for the THE World University Rankings. The information that you submit will be combined with other sources of data and used to create a comprehensive and representative picture of your institution and of others around the world.

Only by submitting data via this portal can your institution be considered for inclusion in the *THE* World University Rankings and multiple related publications and products.

Thank you for taking the time to participate in this important global research project.

Please download our quick-start guide which explains the key aspects of the data collection process and how to navigate your institution's data collection portal account. We recommend that you read the information before you begin your data submission and refer to it during completion of the data collection process.

English user guide

Arabic user guide

Mandarin user guide

German user guide

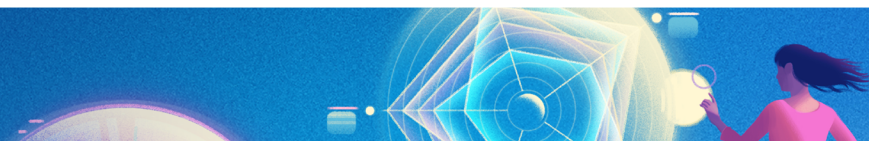
French user guide

Italian user guide

Japanese user guide

Korean user guide

Data collection materials are available for download in 12 languages



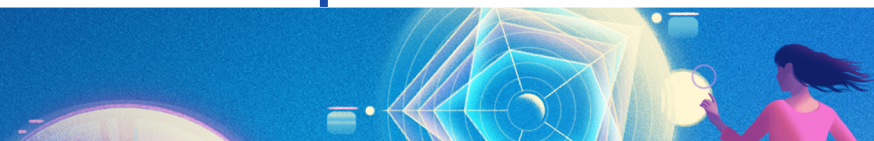
Data Collection Portal 2/3

We collect **data** at the institution level and in our 11 subjects

- Staff and international staff
- Students and international students
- Undergraduate degrees awarded and doctorates awarded
- Income data

New field for this year: outbound exchange students

Art and Humanities
Business and Economics
Clinical and Health
Computer Science
Education
Engineering
Law
Life Sciences
Physical Sciences
Psychology
Social Sciences



Data Collection Portal 3/3

Once you are done with data entry, please go to this tab to submit your data

THE TIMES Higher Education World

Introduction > Institution Profile > **Data** > Notes > **Review, print & submit**

Please provide information about the teaching and research activities of your institution. The more data that you share, the more meaningful your profile will be.

Please note that all information should be entered in English. Click on each of the sections below and complete your data.

Important notes

- Please provide data about people as full-time equivalents (FTE), with no commas or thousand separators (e.g. 18742.5).
- Please note that the income data we request at the subject level (total institutional income, research income, research income from industry and commerce) needs to be broken down by subject. Please DO NOT replicate the income data from the overall level into the subject level. Ideally, any data at the subject level should add up to the data at the overall level.
- Please provide monetary data in the currency selected and report in whole numbers (i.e. 17865456) with no punctuation. Thousands separators and decimal points are not permitted.
- If you are finding it difficult to complete the mandatory fields or in completing the form in English, please do not hesitate to contact us at profilerankings@timeshighereducation.com

Enter the data

All fields marked with a † are required in order to participate in the Overall Rankings. Note that this includes some subject fields. Additionally, fields marked with a * are also required in order to be eligible for the Subject Rankings.

Overall - This section is mandatory for all universities to complete 61%

In this section you should submit data about your institution as a whole. This is not an automatically calculated sum of categories. You are required to enter data manually.

	2020	2019
Number of academic staff (FTE) †	<input type="text" value="562"/>	<input type="text" value="Data unavailable"/>
		<input type="text" value="We do not record this type of infor"/>
Number of academic staff of international/overseas origin	<input type="text" value="230"/>	<input type="text" value="Data unavailable"/>
(FTE) †		<input type="text" value="data unavailable"/>

[IPEDS subject mapping](#)

[Help](#)



Q&A



Explore more of THE's datasets

Would you like to assess the impact of WUR 3.0 on your ranking performance?

THE Consulting provides in-depth knowledge and bespoke analyses to help you navigate the changing world of global higher education

Contact THE Consulting

Join THE Membership to receive these reports on an annual basis

THE members receive exclusive access to a variety of THE resources, events and data to support with training and development. THE Membership is available to universities, organisations and governments for a low annual cost, and includes access to THE's Country Insights Reports (which are updated regularly).

THE Membership

Get direct access to the data via THE DataPoints - THE's data benchmarking platform

Comprehensive country insights data is available in THE DataPoints via an interactive dashboard where you can access all datasets for all countries and territories.

Explore THE DataPoints

Participate in the Impact Rankings

Scan today:



Times Higher Education
Impact Rankings

