

APPENDIX Q2 – B Deconstructing CWTS Leiden Ranking

The Leiden ranking 2020 uses modified publication data from articles and reviews in 2015-2018 Web of Science. Data are presented as fractional count and full count (size-dependent) and as a percent (size independent). 1176 institutions and 65 countries are represented. There is NO composite score. Users can download the dataset.

Defaults: Rankings are based on number of publications. A minimum of 100 publications and fractional count (Share) are the default settings for Scientific Impact and full count for Open Access and Collaboration. **Gender** credits each institution with all their authors. For example, Indian Institute of Science has a fractional publication count of 4689, a full count of 7377, and an authorship count of 13943.

Table Q2-B1 below identifies the top institutions for all the types of indicators and the fields. Another way to use this ranking is to create a profile of a country or an institution. See attached **Table Q2 -B2** for an example of deconstructing India and the Indian Institute of Science

Table Q2-B 1	Deconstructing	CWTS				
SCIENTIFIC FIELD by TYPE OF INDICATOR						
	World	East/South Asia	Oceania	World	E/SE Asia	Oceania
SCIENTIFIC IMPACT	NUMBER OF PUBLICATIONS			PERCENT in TOP 10% in Category		
All Sci	Harvard	Shanghai JTU	Melbourne	Rockefeller	Shandong U S & T	UT Sydney
Biomedical & Health Sci	Harvard	Shanghai JTU	Melbourne	Rockefeller	Shandong Normal	AU Catholic
Life & Earth Sci	U Sao Paulo	Zhejiang	U Queensland	Hunan U	Hunan only Asian U in top 30	U Tech Sydney
Maths & Computer Sci	Tsinghua	Top 12 China/24 of 25 Asia	UNSW	Shandong U ST	5 top 25 China	U Tech Sydney
Physical Sci & Engineering	Tsinghua	Top 25 Asia	UNSW	Harvard	NTU -SG	Edith Cowan
Social Sci & humanities	Harvard	U Hong Kong (51)	Melbourne	MIT	Sejong (KR) - Rank 605	AU Catholic U

COLLABORATION	NUMBER OF COLLABORATIONS			NUMBER OF INTERNATIONAL PUBLICATIONS		
All Sciences	Harvard	U CAS	Melbourne	Harvard	NUS	Melbourne
Biomedical & Health Sci	Harvard	Shanghai JTU	Melbourne	Harvard	NUS	Melbourne
Life & Earth Sci	U CAS	China U Geo -9	U Queensland	Wageningen	CAS	U Queensland
Maths & Computer Sci	Tsinghua	Top 11 Asian	UNSW	K Abdulaziz	NTU-SG	UNSW
Physical Sci & Engineering	U CAS	Top 4 Asian	UNSW	Cambridge	Tsinghua	Monash
Social Sci & humanities	Harvard	NUS	Melbourne	Oxford	NUS	Melbourne
GENDER	FEMALE AUTHORS OF PUBLICATIONS			PERCENT FEMALE AUTHORS		
All Sciences	Harvard	Seoul Ntl U	Melbourne	Med U Bialystok	Mahidol	La Trobe
Biomedical & Health Sci	Harvard	Seoul Ntl	Melbourne	U Agr Krakow	Prince Songkla	Deakin
Life & Earth Sci	U Sao Paulo	U CAS	U Queensland	Lodz U Tech	Kasetsart	Auckland U Tech
Maths & Computer Sci	Xidian U CN	Top 30 Asian	Melbourne	Shanghai Ocean	6/10 Asian	Canberra
Physical Sci & Engineering	Lomonosov RU	Tsinghua	UNSW	Med U Lublin	Mahidol	Deakin
Social Sci & humanities	Harvard	U Hong Kong	Melbourne	Capital Normal U	Chung Shan Med TW	La Trobe
OPEN ACCESS	NUMBER OPEN ACCESS PUBLICATIONS			PERCENT ALL OPEN ACCESS		
All Sci/All OA	Harvard	U Tokyo	Melbourne	Bilkent U TY	Ntl Yang-Ming U TW	Queensland Tech

OPEN ACCESS- GOLD	NUMBER OF GOLD OPEN ACCESS PUBS			PERCENT GOLD OPEN ACCESS		
All Sci	Harvard	Shanghai JT	Melbourne	China Acad Chin Med Sci	23/25 Asia	James Cook
Biomedical & Health Sci	Harvard	Shanghai JT	Melbourne	U Ghana	Beijing Univ CN Med	James Cook
Life & Earth Sci	U CAS		U Queensland	London Sc Hyg & Trop Med	Chang Gung U TW	James Cook
Maths & Computer Sci	U Electron ST CN	47/50 E Asia	U Tech Sydney	N China U	47/50 E Asia	James Cook
Physical Sci & Engineering	Tsinghua		U Sydney	Rockefeller	Cn Chin Med Sci	U Canterbury
Social Sci & humanities	UCL	Beijing Normal	U Melbourne	Catholic U Korea		James Cook

NOTES: CWTS includes Hong Kong and Macau with China; Russia and Turkey are included in European and Asian rankings.

World - THE and QS do not include universities offering only graduate degrees such as Rockefeller and U Chinese Academy of Sciences

Life & Earth - U Sao Paul is #2; Hunan is ranked 330 for publications

Maths & Computer - 23/25 from China and one each from Singapore and South Korea; In **Collaboration**, top 10 are Chinese

Physical Sci & Engineering -Edith Cowan is 8th in %; NTU is 29th.

Social Sci & Humanities - U Hong Kong at 62 is top in Asia; many Asian universities did not meet the 100 article default limit

Collaboration: Collaborations can be domestic, international or with industry and must have more than one institution ;

Middle East universities rank highly in percent of international collaborations with King Abdulaziz leading.

Gender: Thailand and Poland lead as countries in percent of female authorship

Open Access ranks gold, hybrid, bronze, green and unknown; More on open access rankings in following article

See attached **Table Q2-B** for a deconstruction of India and the Indian Institute of Science