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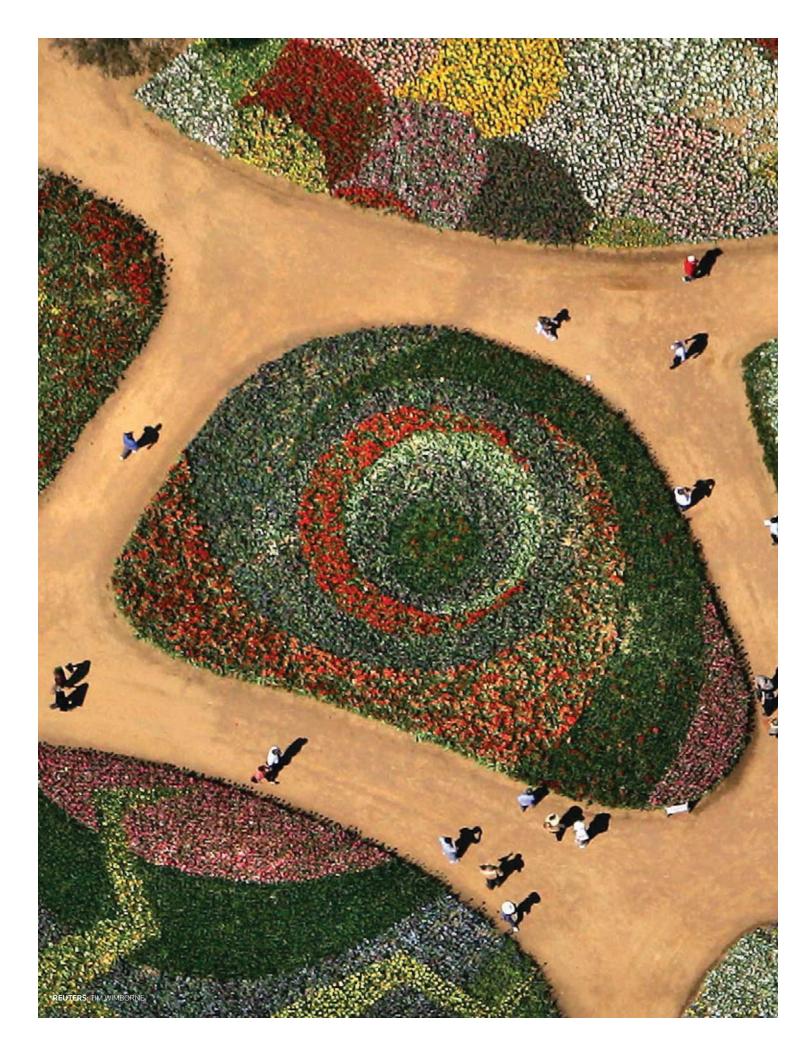
EXPLORING SCHOLARLY TRENDS AND SHIFTS IMPACTING THE ACADEMIC REPUTATION OF THE WORLD'S LEADING UNIVERSITIES





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OVERVIEW

A strong global academic reputation empowers a university's ability to recruit high-quality staff and students, establish valuable international partnerships, and connect with greater funding prospects. It provides the necessary tools for leaders to advance their institutions' reputations by developing better-informed strategies toward achieving short- and long-term goals, all of which can only be determined via an evaluation of academic standing through sophisticated analytics.

In an effort to explore and evaluate trends influencing the academic reputation of the world's leading universities, analysts with Thomson Reuters are unveiling the findings of the Thomson Reuters Academic Reputation Survey. They compiled and scrutinized the survey's comprehensive findings ranging from 2010 to 2014 to identify fluctuations across the global academic landscape.

Now entering its sixth year, the Thomson Reuters Academic Survey serves as a robust analysis by identifying the Top 100 Global Universities and offering a wide-ranging view of the diverse aspects that define a university's reputational standing, as well as shifts in academic opinion over time and geographical variances.

The results of each survey are fueled by assessments from the world's leading academics. The combined survey results to date (2010-2014) contain more than 1.5 million individual data points and have recorded 65,000 responses, covering 6,500 of the world's leading universities across 105 disciplines.



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THOMSON REUTERS ACADEMIC REPUTATION SURVEY 2010-2014

5 YEARS OF RESULTS (2010-2014)

65,000 SURVEY PARTICIPANTS

6,500 UNIVERSITIES REPRESENTED

105 SUBJECT AREAS

This study reveals shifts in reputation by identifying the universities with the most improvement over the five-year period, exploration into subject areas, and a breakdown of the academic leaders by region.

Some key findings::

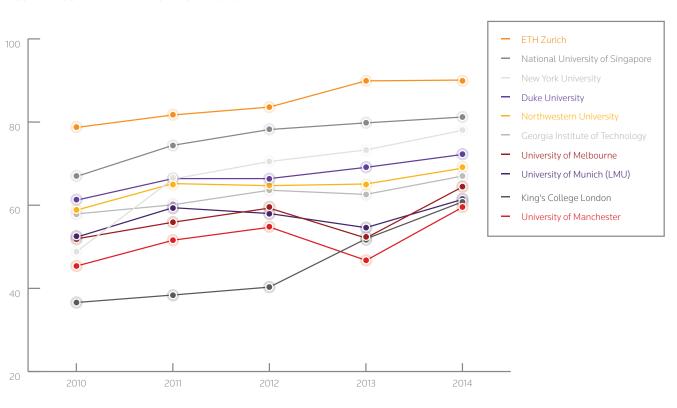
- Harvard leads the Top 100 in each category
- Universities from 20 countries are represented in the Top 100
- New York University (NYU) and King's College London experienced the greatest increases in reputational standing over the five-year perioc
- Muttidisciplinary universities often have a stronger general reputation than specialty intuitions, with strong performance in their area of focus
- A granular approach to subjects can lead to reputational excellence within the area of focus; for example, the London School of Business and INSEAD hold the fifth and sixth highest global reputations in Business Studies
- The perspective of academics on institutions within their geographical region often contrasts with global perception
- Volume of research generally correlates with reputation, including papers co-authored with researchers in other regions.

MOST IMPROVED UNIVERSITIES

While some universities have long held coveted positions as leaders of the pack, an institution's academic reputation is not set in stone. This is especially apparent in recent years, with rapid advances across the scholarly landscape and academia's continued transition toward international collaboration. These changes have provided universities across the globe with a variety of opportunities to advance their reputational standing.

Figure 1: Most Improved Reputation 2010-2014 identifies universities among the Top 50 that have most advanced their academic reputation within the five-year period, with an emphasis on the 2014 survey results. NYU and King's College London are the leaders; what is particularly striking is that both institutions have continuously maintained their high level of performance throughout the period.

FIGURE 1: MOST IMPROVED REPUTATION 2010-2014



The Y axis in Figure 1 is a score from 0-100 based on cumulative probability, representing probability that another university selected from the same data set would fall below the university in question. For example, if a listed university has a score of 80, then other universities will fall below that institution 80 percent of the time. The cumulative probability scoring mechanism is preferential, as a rank position forces a linear scaling to the ordering of the universities and may not reflect actual performance.

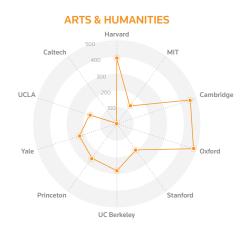
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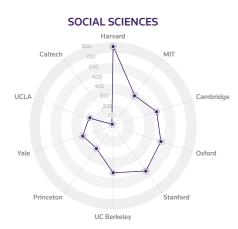
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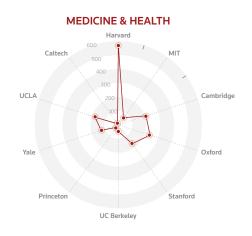
LEADING UNIVERSITIES BY SUBJECT AREA

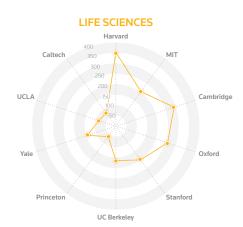
The survey results for the Top 10 leading universities in major subject areas—including physical sciences, engineering and technology, life sciences, medicine and health, social science and arts and humanities—tend to favor a small number of universally recognized institutions.

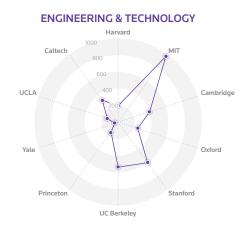
FIGURE 2: SUBJECT MIX TOP UNIVERSITIES 2014

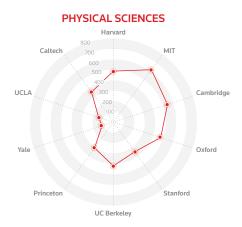














REUTERS: NAVESH CHITRAKAR

As seen in Figure 2, there is significant variance across the subject areas. None of the universities have been identified as being particularly strong across all of the major subjects.

The findings on the Massachusetts Institute of Technology (MIT) and the California Institute of Technology (Caltech) are of particular interest. While MIT was not regarded as highly in medicine as it was in other areas, medicine was still included within its subject mix despite the institution not having a school for this discipline. This is a reflection of the interdisciplinary nature of science. The case of Caltech is especially impressive. Its focused efforts on physical sciences, engineering and technology have been very successful, as it is strongly ranked in these areas, comparative to much larger institutions.

The 2014 Ranking of Leading Universities by Subject (as shown in Table 1) dives more deeply into major subject area assessment by ranking the Top 10 institutions in each discipline. There are a few notable surprises within this listing that demonstrate a shift in global academic perspective, with the recognition of strong performance by the University of San Francisco (UCSF), the Karolinksa Institute and the London School of Economics and Political Science (LSE).

TABLE 1: RANKING OF LEADING UNIVERSITIES BY SUBJECT 2014

Rank	Arts & Humanities	Medicine & Health	Life Sciences	Physical Sciences	Engineering & Tech	Social Sciences
1	Oxford	Harvard	Harvard	MIT	MIT	Harvard
2	Cambridge	Johns Hopkins	Cambridge	Cambridge	Stanford	Stanford
3	Harvard	Oxford	Oxford	Oxford	UC Berkeley	Oxford
4	UC Berkeley	Cambridge	Stanford	Harvard	Cambridge	Cambridge
5	Princeton	UCLA	MIT	UC Berkeley	Caltech	UC Berkeley
6	Yale	Stanford	UC Berkeley	Caltech	Imperial Coll.	MIT
7	Stanford	UCSF	Yale	Stanford	ETH Zurich	LSE
8	UCLA	Yale	UC Davis	Princeton	Oxford	Yale
9	Chicago	Toronto	Cornell	ETH Zurich	Harvard	Chicago
10	Columbia	Karolinska Ins.	UCSF	Imperial Coll.	Georgia Tech	Princeton

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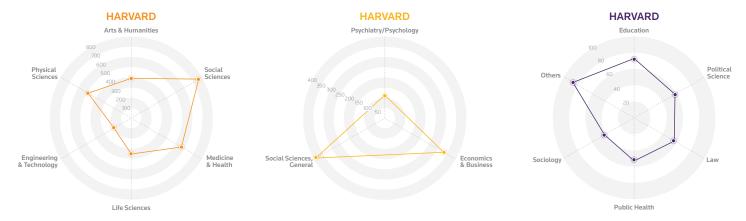
CASE STUDY

Harvard University 2014

A Detailed Breakdown by Subject Areas

Over the last five years, Harvard University has dominated the Thomson Reuters Academic Reputation Survey as the leader of the overall ranking of the Top 100 global universities. Therefore, it is only fitting to take a closer look at this university to demonstrate the various possible views of subject breakdown.

FIGURE 3: HARVARD UNIVERSITY 2014 DETAILED



The first section of Figure 3 shows the broadest disciplinary view of Harvard's performance across the major subject areas. It is identical to Figure 2. The central section provides an expanded view of the major social sciences subject area and the final sections offer a narrower breakdown of performance within the general social sciences discipline)

CASE STUDY

Leading Universities in Business Studies

While a university may be one of the leaders of a major subject area, the institution may not always rank among the Top 10 in reputational standings based on a narrow discipline within that broader subject area.

Institutions with a detailed focus on a specific disciple achieve reputational excellence in that specialty. For example, the London Business School and INSEAD are much smaller than the other universities ranked among the 2014 Top 10 universities in business studies, but their granular approach led them toward the fifth and sixth position among global reputations in this narrow area.

TABLE 2: LEADING UNIVERSITIES IN BUSINESS STUDIES 2014

Rank	Business Studies	# of votes
1	Harvard University	168
2	Stanford University	144
3	MIT	110
4	University of Pennsylvania	92
5	London Business School	81
6	INSEAD Business School	75
7	University of California Berkeley	69
8	University of Chicago	68
9	Northwestern University	62
10	New York University (NYU)	54

Table 2 is based on the vote count (number of survey participants that selected the university) in 2014, limited to the narrow discipline of business studies.

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REGIONAL LEADERS IN ACADEMIC REPUTATION

REGIONAL OVERVIEW

The regional reputational standing of a university can sometimes differ from its global reputation. This section of the report, which is broken down by regions, explores these differences and recognizes the reputational standing of the leaders within each geographical area.

A survey respondent's view on the institutions within his/her geographical area often varies from the general global perspective, primarily because the work of some regional academic leaders may not be as well-known in other parts of the world. The second cause of potential gaps between regional and global perceptions appears in cases where the geographical distribution of co-authorship may not correlate to reputation.

To address and evaluate these contrasts, the survey includes a question on the best university within the respondent's region, which has allowed for the analysts to further decipher the differences in regional and global perspectives.

AFRICA

The results of Table 3: Africa's Leading Universities 2010-2014 was determined over the five-year period by survey respondents living in Africa.

The ranking is dominated by South African universities, with the University of Cape Town as the clear regional leader in academic reputation. Based on its global ranking, the regional reputation of Egypt's Cairo University is significantly lower than expected. This may be a reflection of its geographical location to the Middle East.

TABLE 3: AFRICA'S LEADING UNIVERSITIES 2010-2014

Rank (Local)	Rank (Global)	University	Country/Region
1	160	University of Cape Town	South Africa
2	366	University of Witwatersrand	South Africa
3	438	Stellenbosch University	South Africa
4	366	University of Pretoria	South Africa
5	638	University of KwaZulu Natal	South Africa
6	608	University of Johannesburg	South Africa
7	285	Cairo University	Egypt
8	655	Ain Shams University	Egypt
9	731	Makerere University	Uganda
10	664	University of Ghana	Ghana

ASIA

The ranking of Asia's universities as determined by respondents in the region is similar to the global response, with the exception of the Hong Kong University of Science and Technology (HKUST). There are two possible explanations for this disparity. Survey participants in Asia tend to focus more on applied sciences—HKUST's main area of strength—and less on historical reputation. HKUST was founded in 1991; its short history may put it at a disadvantage among global respondents in comparison to institutions.

TABLE 4: ASIA'S LEADING UNIVERSITIES 2010-2014

Rank (Local)	Rank (Global)	University	Country/Region
1	12	University of Tokyo	Japan
2	21	Kyoto University	Japan
3	36	Tsinghua University	Peoples R China
4	37	Seoul National University	South Korea
5	44	Peking University	Peoples R China
6	63	Osaka University	Japan
7	78	Tohoku University	Japan
8	58	Hong Kong University of Science & Technology	Peoples R China
9	59	National Taiwan University	Taiwan
10	49	University of Hong Kong	Peoples R China

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EUROPE

The ordering of Europe's regional rankings significantly differs from the results of the global listing. This suggests that some of the continent's universities may not be well-known outside of their respective countries. The contrast may also be associated with language barriers among survey respondents.

TABLE 5: EUROPE'S LEADING UNIVERSITIES 2010-2014

Rank (Local)	Rank (Global)	University	Country/Region
1	3	University of Cambridge	United Kingdom
2	4	University of Oxford	United Kingdom
3	11	Imperial College London	United Kingdom
4	16	Swiss Federal Institute of Technology (ETH Zurich)	Switzerland
5	52	M. V. Lomonosov Moscow State University	Russian Federation
6	23	University College London	United Kingdom
7	42	University of Munich (LMU)	Germany
8	166	Charles University in Prague	Czech Republic
9	43	University of Edinburgh	United Kingdom
10	26	London School of Economics & Political Science	United Kingdom

LATIN AMERICA

Survey participants in Latin America strongly supported the academic reputational standings of universities in Brazil, specifically the University of Sao Paulo, which dominated the ranking over the five-year period. Six other Brazilian universities are also listed among the Top 10 universities in Latin America.

TABLE 6: LATIN AMERICA'S LEADING UNIVERSITIES 2010-2014

Rank (Local)	Rank (Global)	University	Country/Region
1	84	Universidade Sao Paulo	Brazil
2	192	Universidade Estadual de Campinas	Brazil
3	324	Universidade Federal do Rio de Janeiro	Brazil
4	253	University of Buenos Aires	Argentina
5	437	Universidade Federal do Rio Grande do Sul	Brazil
6	331	Universidade Federal de Minas Gerais	Brazil
7	359	Universidad de Chile	Chile
8	322	UNESP - Universidade Estadual Paulista	Brazil
9	342	Universidade Federal de Sao Paulo	Brazil
10	321	Pontificia Universidad Católica de Chile	Chile

CASE STUDY

University of Sao Paulo

Regional Versus Global Perception and Research Output Versus Reputation

Sao Paulo has one of the highest rates of support by respondents within its region, which sharply contrasts with global recognition.

While academics in Europe and North America have acknowledged the University's efforts, Figure 4: Geographical Location of Respondents that Selected the University of Sao Paulo, reveals little recognition in Africa and Asia, suggesting that the University has not reached international brand status.

FIGURE 4: GEOGRAPHICAL LOCATION OF RESPONDENTS THAT SELECTED THE UNIVERSITY OF SAO PAULO



While the institution is not yet recognized as an international academic powerhouse, the University of Sao Paulo appears to be moving in that direction with its significant global research footprint. Its rate of collaboration suggests that the University's global reputation lags behind its research performance.

FIGURE 5: GEOGRAPHICAL LOCATION OF CO-AUTHORS OF UNIVERSITY OF SAO PAULO'S RESEARCH PAPERS



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NORTH AMERICA

North America's Top 10 universities, as determined by respondents within the region, are entirely dominated by institutions in the United States, but the ordering of these universities differs from the global ranking. Similar to Asia's focus on engineering and technology, North American participants tend to focus on social sciences, which explains the strong performance ratings of the University of Chicago and University of Michigan. The respondents in this region also tend to slightly favor public universities.

TABLE 7: NORTH AMERICA'S LEADING UNIVERSITIES 2010-2014

Rank (Local)	Rank (Global)	University	Country/Region
1	1	Harvard University	USA
2	6	University of California, Berkeley	USA
3	5	Stanford University	USA
4	2	Massachusetts Institute of Technology	USA
5	15	University of Michigan, Ann Arbor	USA
6	7	Princeton University	USA
7	9	University of California, Los Angeles	USA
8	8	Yale University	USA
9	14	University of Chicago	USA
10	13	Columbia University	USA

Note that in this chart each paper is fully counted towards the institution regardless of the number of co-authors

OCEANIA

Unlike the other regions, the location-based survey results for Oceania generally align with the global perspective.

TABLE 8: OCEANIA'S LEADING UNIVERSITIES 2010-2014

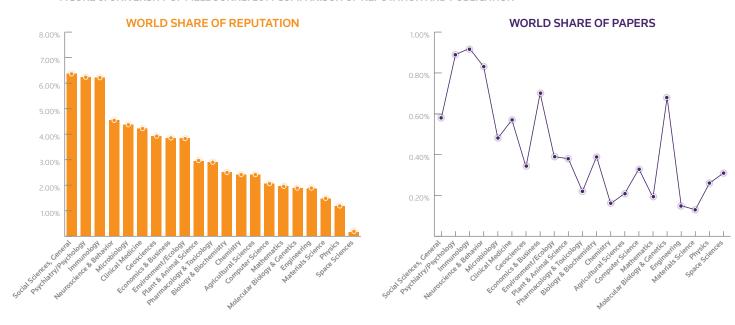
Rank (Local)	Rank (Global)	University	Country/Region
1	35	University of Melbourne	Australia
2	50	Australian National University	Australia
3	51	University of Sydney	Australia
4	88	Monash University	Australia
5	92	University of Queensland	Australia
6	109	University of New South Wales	Australia
7	183	University of Western Australia	Australia
8	201	University of Auckland	New Zealand
9	217	RMIT University	Australia
10	225	University of Newcastle	Australia

CASE STUDY

University of Melbourne Reputation Versus Publication

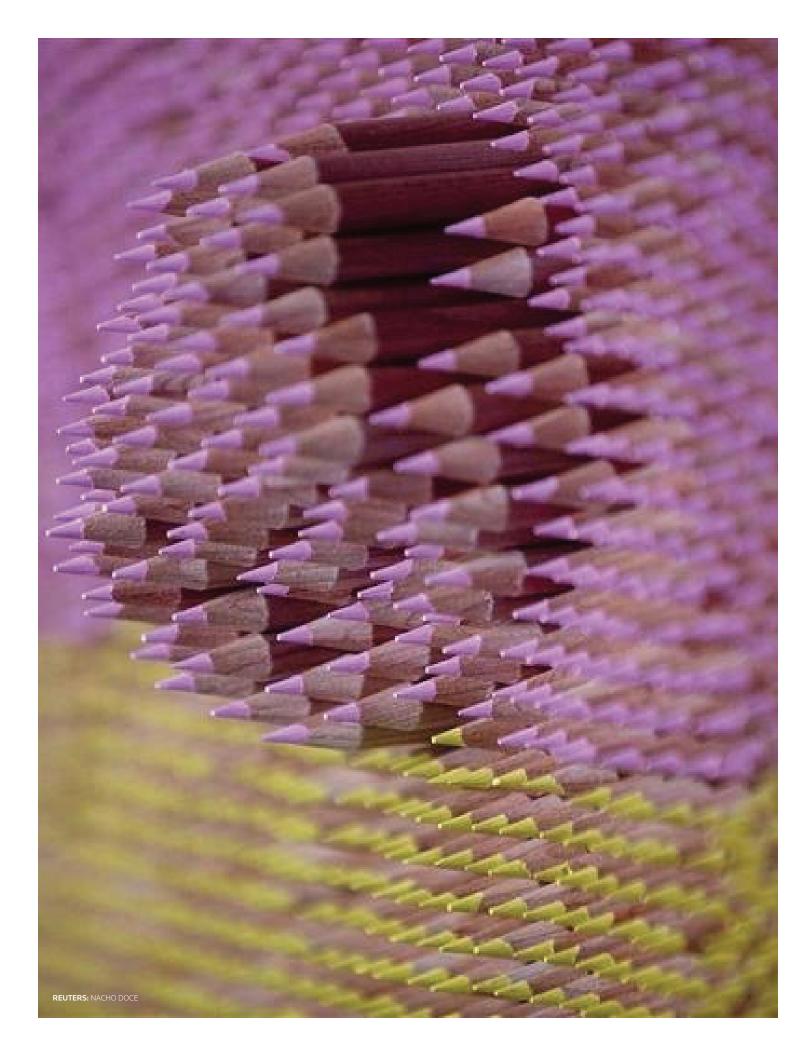
As the volume of a university's research generally parallels its reputation, there are some cases of geographical distribution of co-authorship where the reputation may not correlate. As seen in Figure 6: University of Melbourne: 2014 Comparison of Reputation and Publication, there is a good rate of correlation between the University's global share of publications and academic reputation. However, there were some exceptions, especially in space sciences. These variations may be related to differences in co-authorship, which could speak to the recent scholarly trend of massive multi-authored papers. This may have led to over counting in space sciences and other areas.

FIGURE 6: UNIVERSITY OF MELBOURNE: 2014 COMPARISON OF REPUTATION AND PUBLICATION



Note: This chart contains a full count of each paper toward the institution regardless of the number of co-authors

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2015 ACADEMIC REPUTATION SURVEY

Now in its sixth annual cycle, the 2015 edition of the survey will run through June. The contributions of the global academic community are essential to conducting this robust analysis.

Please contact <u>science.profilesproject@thomsonreuters.com</u> with any questions on the survey.

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