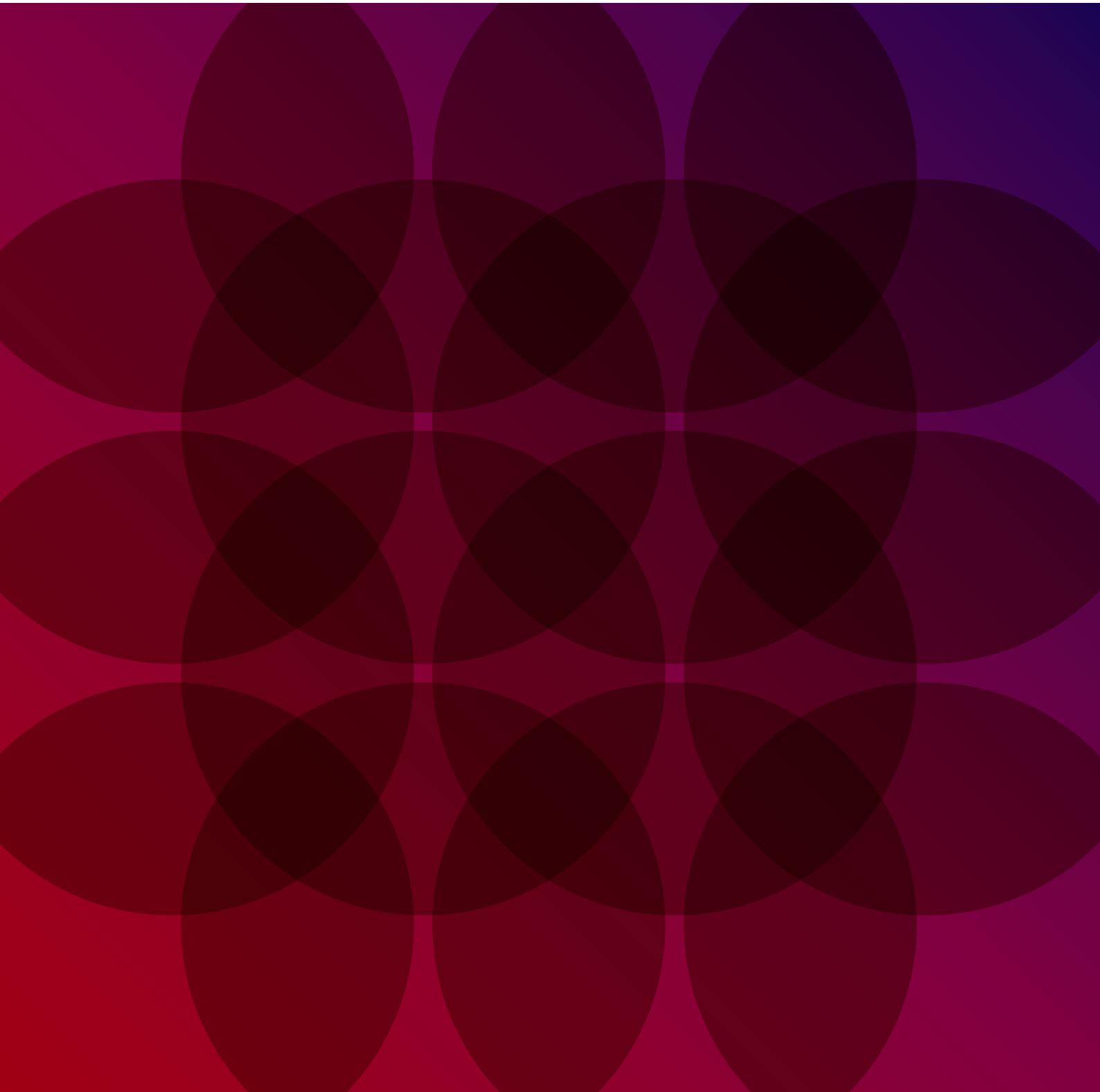


CONSULTANCY
REPORT

INTERNATIONAL RESEARCH COLLABORATIONS: MOTIVATORS, ENABLERS AND BARRIERS

SEPTEMBER
2022

FINDINGS FROM A GLOBAL
SURVEY OF 9,606 ACADEMICS



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ABOUT THE RESEARCH

In May-June 2022, THE Consultancy carried out an online survey of research-active academics utilising THE's database of contacts – the same used for THE's annual Academic Reputation Survey.

The survey was made available in eight different languages (English, French, German, Japanese, Korean, Portuguese, Simplified Chinese, and Spanish).

Responses were received from 9,606 academics from 114 countries. Results presented in this report have been weighted by geography and primary subject to be broadly representative of the population of research active persons, as according to UNESCO / OECD data.

The tables below detail the key demographic characteristics of the respondents (unweighted).

COUNTRY	
United Kingdom	14%
United States	9%
Japan	7%
Germany	6%
Spain	6%
France	4%
Brazil	4%
Australia	4%
Canada	4%
Netherlands	4%

Based on current institutional affiliation - top 10 shown

PRIMARY SUBJECT AREA	
Life Sciences	19%
Clinical, pre-Clinical & Health	13%
Engineering	13%
Physical Sciences	13%
Social Sciences	10%
Arts & Humanities	7%
Business & Economics	7%
Education	6%
Computer Sciences	5%
Psychology	5%
Law	1%
Prefer not to say	1%
TIME ACTIVE IN RESEARCH	
Less than 10 years (early career researcher)	21%
10-19 years	25%
20 years or more	54%

75%
**A WILLINGNESS
 TO COLLABORATE
 OPENLY AND
 WITH TRUST
 (75%) IS JUST
 AS IMPORTANT
 AS ALIGNMENT
 OF RESEARCH
 EXPERTISE
 (73%) WHEN
 SEEKING AN
 INTERNATIONAL
 RESEARCH
 COLLABORATOR.**

69%

Personal interactions are by far the most influential factor informing opinions about the reputation of individual researchers (69%), though where the academic publishes (“journal prestige”) is still an important factor (49%).

44%

Having shared ethics and values (44%) is a key enabler for initiating a successful research collaboration (second only to having a common approach to the research; 69%)

**IN-PERSON
 VISITS, INFORMAL
 NETWORKING, AND IN
 PERSON CONFERENCES
 ARE SEEN AS THE MOST
 EFFECTIVE ACTIVITIES
 FOR CREATING
 NEW RESEARCH
 COLLABORATIONS**

Judging whether research has meaningfully contributed to an academic’s field (75%) is most influential in assessing whether a research collaboration has been successful

**THE MOST SIGNIFICANT
 BARRIERS TO INITIATING A NEW
 RESEARCH COLLABORATION
 ARE A LACK OF PERSONAL
 INTERACTIONS (46%) AND
 LACK OF EXISTING CONTACTS
 (44%), AS WELL AS A LACK
 OF FUNDING OPPORTUNITIES
 FROM AN ACADEMIC’S
 INSTITUTION (45%)**

INTRODUCTION

In a globalised world, which enables researchers and academics to collaborate with fewer geographical barriers, international collaboration can offer academics and universities the opportunity to share skills, knowledge and newly developed techniques, while also building their reputations and research impact.

Numerous studies have emphasised that international collaboration is increasing as a global trend. As shown in Figure 1, across the world the proportion of academic publications with international co-authorship has increased over the past decade.

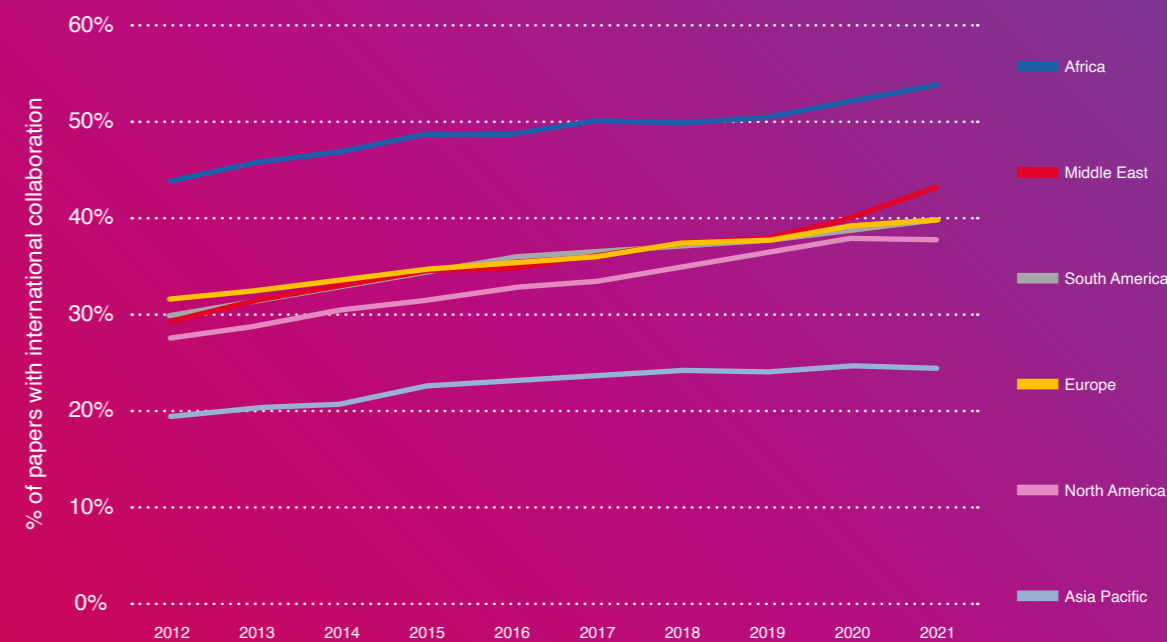
It is also well documented that international collaboration can increase the number of citations a paper receives.¹ As displayed in Figure 2, countries which have a greater proportion of publications with international co-authorship tend to have higher Field Weighted Citation Impact (FWCI) – a measure designed to reflect the impact of the academic output.

In recognition that international collaboration, and internationalisation in general, are key tenets of many universities' core missions, the Times Higher Education (THE) World University Rankings includes a metric which directly measures the proportion of a university's publications with international co-authorship. As well as this direct impact on a university's rank, international collaboration can also impact performance in other metrics, such as the highly weighted citations and research reputation metrics.

Whilst the importance and desirability of international collaboration are well established, the underlying factors used by academics to identify collaborators is not widely researched.

This report therefore details findings from THE's Consultancy team who undertook an online survey of 9,606 research-active academics from around the world. The report includes findings related to academics' opinions and perspectives of the enablers of international research collaborations, assessing research reputation, barriers to international research collaboration and assessing the effectiveness of research collaborations.

PROPORTION OF PUBLICATIONS WITH INTERNATIONAL CO-AUTHORSHIP OVER TIME



Source: Elsevier's SciVal (accessed 29 August 2022)

Figure 1

RELATIONSHIP BETWEEN INTERNATIONAL CO-AUTHORSHIP AND FIELD WEIGHTED CITATION IMPACT (FWCI), BY COUNTRY

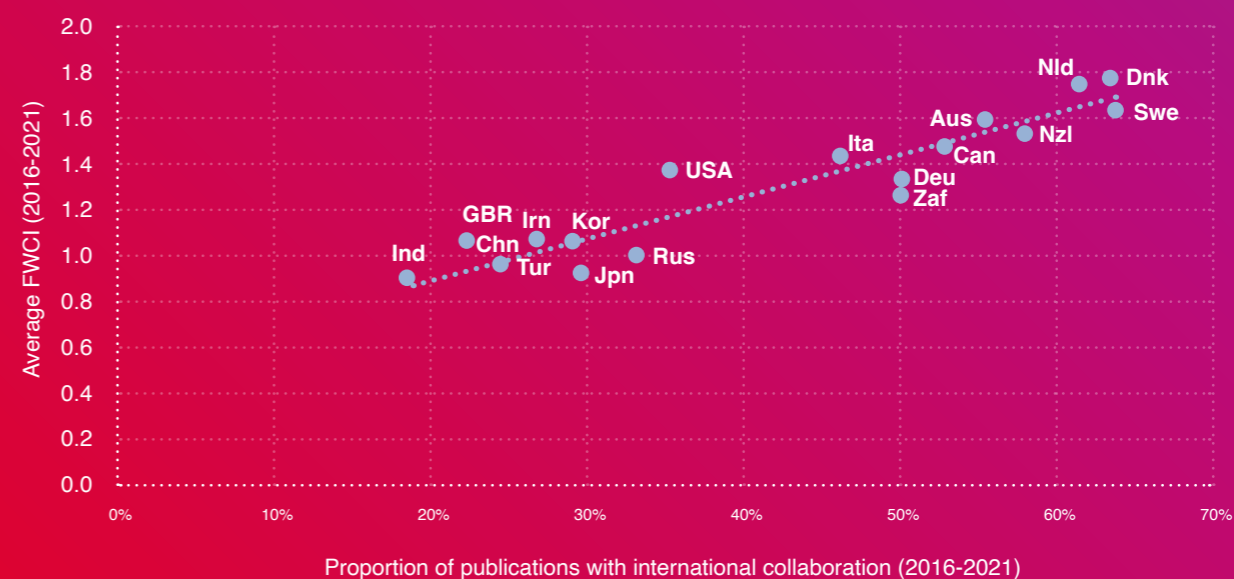


Figure 2

ENABLERS OF INTERNATIONAL RESEARCH COLLABORATIONS

In considering the enablers of international research collaborations there were three topics explored in the survey:

- What are the most important things academics look for when seeking an international collaborator or partner
- What are the most important enablers for initiating a successful collaboration
- How effective certain activities – such as attending conferences – are in helping to forging new collaborative partnerships

What academics seek in a new collaborator

It was clear from our survey that there are two fundamentally important factors which academics look for when seeking a new collaborator:

- A willingness from the other party to collaborate openly and with trust (75% identified this as being of importance, with 32% selecting it as the single most important factor); and
- Alignment of research expertise (73% identified this as being of importance, with 32% selecting it as the single most important factor)

These two factors being most important seems intuitive and a prerequisite for any successful research collaboration. Indeed, these were the top two factors irrespective of the continent in which the responding academics were based and irrespective of subject specialism. However, looking further down the list of factors presented in Figure 3, we see that the reputation of individual researchers was the third most important factor (selected by 51% of academics as being of importance, with 11% identifying it as the single most important factor). Interestingly, this was much higher than the proportion of academics identifying the reputation of the university as being of importance, showing that individual reputation is more important than institutional reputation when it comes to selecting collaborators.

The most important enablers for initiating a successful collaboration

When asked to consider the most important enablers for initiating a successful collaboration, the most popular response was 'having a common approach to the research' followed by having 'shared ethics and values' (see Figure 4). In these two factors – coupled with the importance placed on collaborating openly and with trust, discussed above – we see the importance placed at the individual level and the need for positive personal relations when embarking on a new collaboration.

Geographical proximity was seen as being of little importance in enabling a successful collaboration (only 5% of academics surveyed identified this as being of importance). Previous research has reported that with increasing distance between collaborators, the likelihood of collaboration declines.² The findings of that

MOST IMPORTANT THINGS SOUGHT WHEN SEEKING AN INTERNATIONAL INSTITUTION TO COLLABORATE OR PARTNER WITH

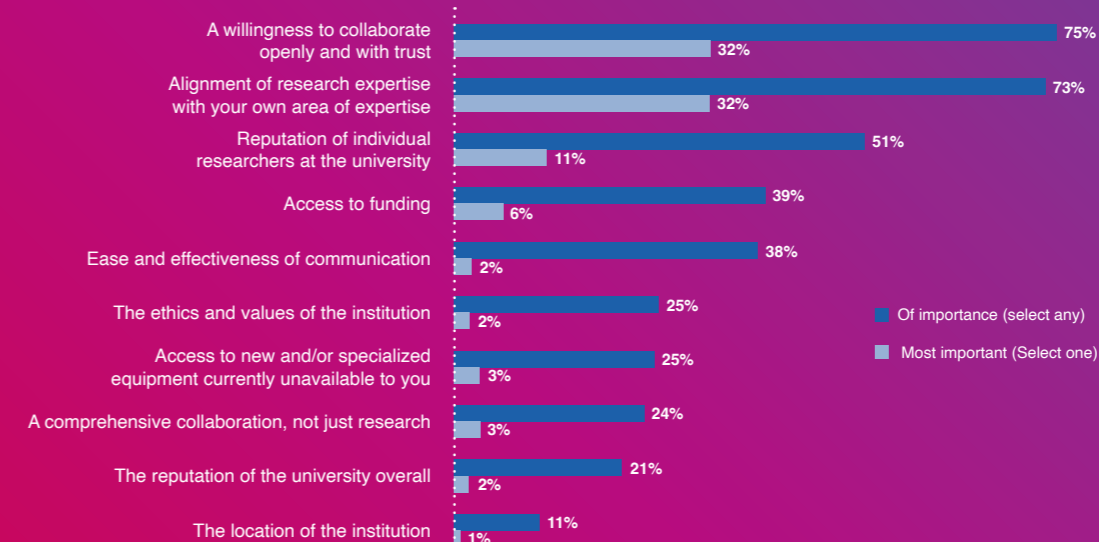


Figure 3

MOST IMPORTANT ENABLERS FOR INITIATING A SUCCESSFUL COLLABORATION



Figure 4

research were published prior to the COVID-19 pandemic, during which those in academia – and almost all fields – were forced to conduct work at a distance. These experiences may have broadened horizons in how academics view the importance of geographical proximity in establishing new partnerships. If geographical proximity is becoming less of a consideration, there may be greater possibilities for researchers to forge collaborations with partners who are further afield.

Effective activities for creating new collaborations

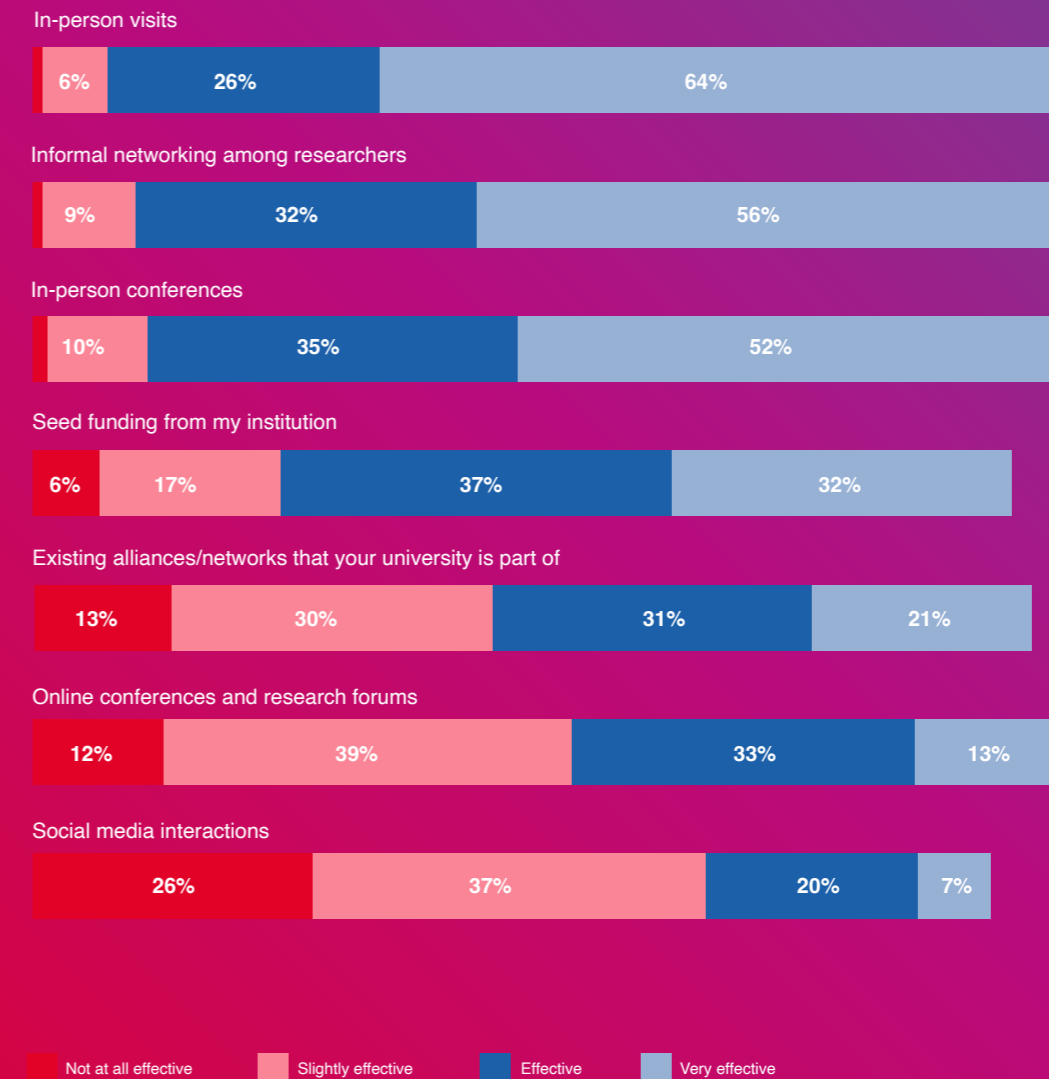
When asked about activities which are effective in creating new research collaborations, academics in our survey prioritised the importance of personal relationships over formal networks. Almost all (90%) reported in-person visits as being effective, with a similar proportion (88%) identifying informal networking among researchers as effective, and 87% identifying in-person conferences as effective. This compares to just 51% who rated existing alliances/networks that their universities are a part of as being effective in establishing new collaborations.

This finding is also a theme in general literature on the topic. In a qualitative study, 'top performing' academics from Denmark, Australia and Israel reported that they form collaborations 'mainly through individual bottom-up activities and only rarely through top-down institutional or other initiatives'.³ It has also been reported that communication and personal links both on an academic and administrative level are crucial factors in 94.6% of successful and 74.3% of unsuccessful partnerships.⁴

Notably, in this question, there was a difference in responses between early career and mid/late career academics. Two thirds (67%) of early career academics said that existing alliances/networks that their universities are a part of are effective in helping them to create new research collaborations, whilst 48% of mid/late career academics said that this was effective. This shows that while top-down university strategies can be viewed as ineffective overall, early careers researchers find them more useful, which is perhaps linked to them lacking an established reputation to effectively develop a wide network of contacts.

There was also a difference in social media interactions, where 25% of academics in their mid/late careers found that social media is effective in helping to create new research collaborations in comparison to the 36% of early career academics that found this effective. This potentially shows a change in how collaborations are being formed over time, with a younger generation of academics utilising social media to a greater extent to initiate such partnerships. ■

EFFECTIVENESS OF SELECTED ACTIVITIES IN CREATING NEW RESEARCH COLLABORATIONS



ASSESSING RESEARCH REPUTATION

Scholarly reputation can be defined as ‘the overall judgment of a scholar’s standing, based on their research and impact on the field as determined by experts in that field.’ The concept of scholarly reputation is a much discussed topic and, as discussed in the previous chapter, among the top three most important considerations for academics when identifying potential collaborators. What is less well understood is what factors academics take into account when forming that judgment.

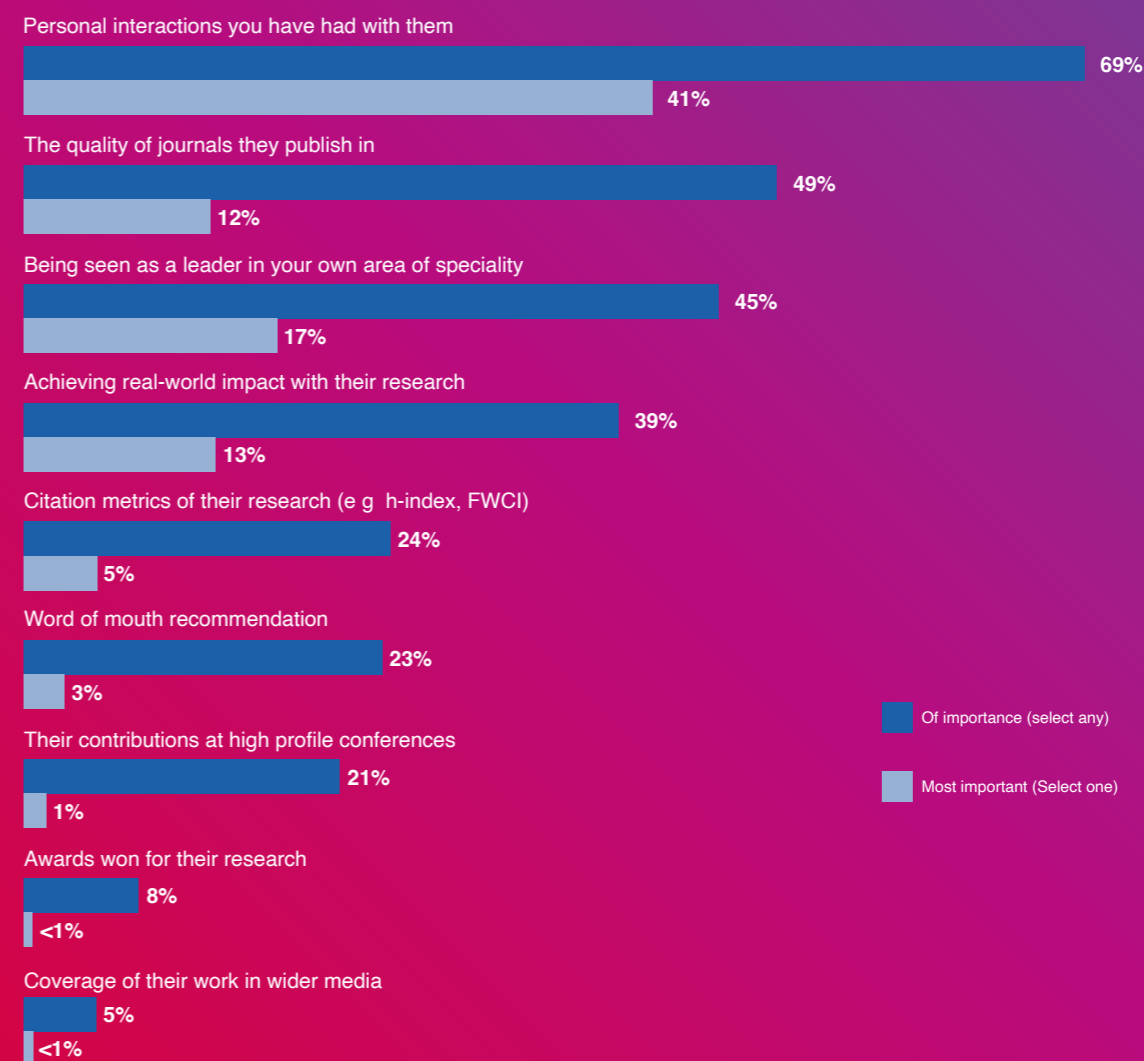
In our survey, 69% of academics selected personal interactions with individual researchers as being of importance in forming that judgment, with 41% citing this as the single most important factor. This gives rise to the importance of direct interactions with scholars through activities such as conferences to showcase expertise and impact.

Interestingly, almost half (49%) of academics use the quality of journals that researchers publish in (‘journal prestige’) as being important to forming judgments about scholarly reputation, with 12% citing this as the most important factor. This may come as a surprise following sustained efforts in recent years to lessen the so-called “prestige economy” in academic publishing, which some blame for rising subscription and open access costs at top journals and the marginalisation of research published outside big-name titles.⁵ Indeed, taking the field of business and management as an example, research by Haley and colleagues showed that a majority of members of the Association of Management believe that journal rankings and impact factors probably did not reflect journal quality or scholarly impact yet are still widely used to evaluate faculty contributions.⁶

Our data also reveals that research reputation among academics in Africa, Asia and South America is more based on tangible, hard metrics such as quality of publications, citations, awards, and media coverage, whereas soft indicators like interpersonal communication and word of mouth recommendation hold much more value in Europe, Oceania and North America.

MOST INFLUENTIAL FACTORS WHEN FORMING OPINION ABOUT RESEARCH REPUTATION OF INDIVIDUAL RESEARCHERS

Figure 6



BARRIERS TO INTERNATIONAL RESEARCH COLLABORATION

The trend of increasing levels of international co-authorship – as discussed in the introduction of this report - suggest that barriers to cross border collaboration are lessening. That is not to say, however that they do not exist at all.

Indeed, when asked to identify the most significant barriers to initiating new international research collaborations, only 4% of academics in our survey reported no barriers at all. Instead, international academics who participated in the survey reported numerous barriers in the pursuit of new international collaborations.

Almost half (46%) cited a lack of in-person interactions as a major impediment, with 20% identifying this as the single most significant barrier (see Figure 7). Due to travel limitations during the course of the COVID-19 pandemic the possibility for networking at events, conferences, and seminars has decreased, widening the experience of this barrier. As described earlier in this report, in-person conferences and visits are commonly regarded as effective activities in establishing new research collaborations, hence their absence in recent years will have been keenly felt.

A lack of existing strong ties or networks was also identified as a major challenge by 44% of respondents. This proportion was larger among early career academics (57%) than late-career academics (41%), highlighting the need for universities and supervisors to support early career researchers in establishing and growing their network of contacts.

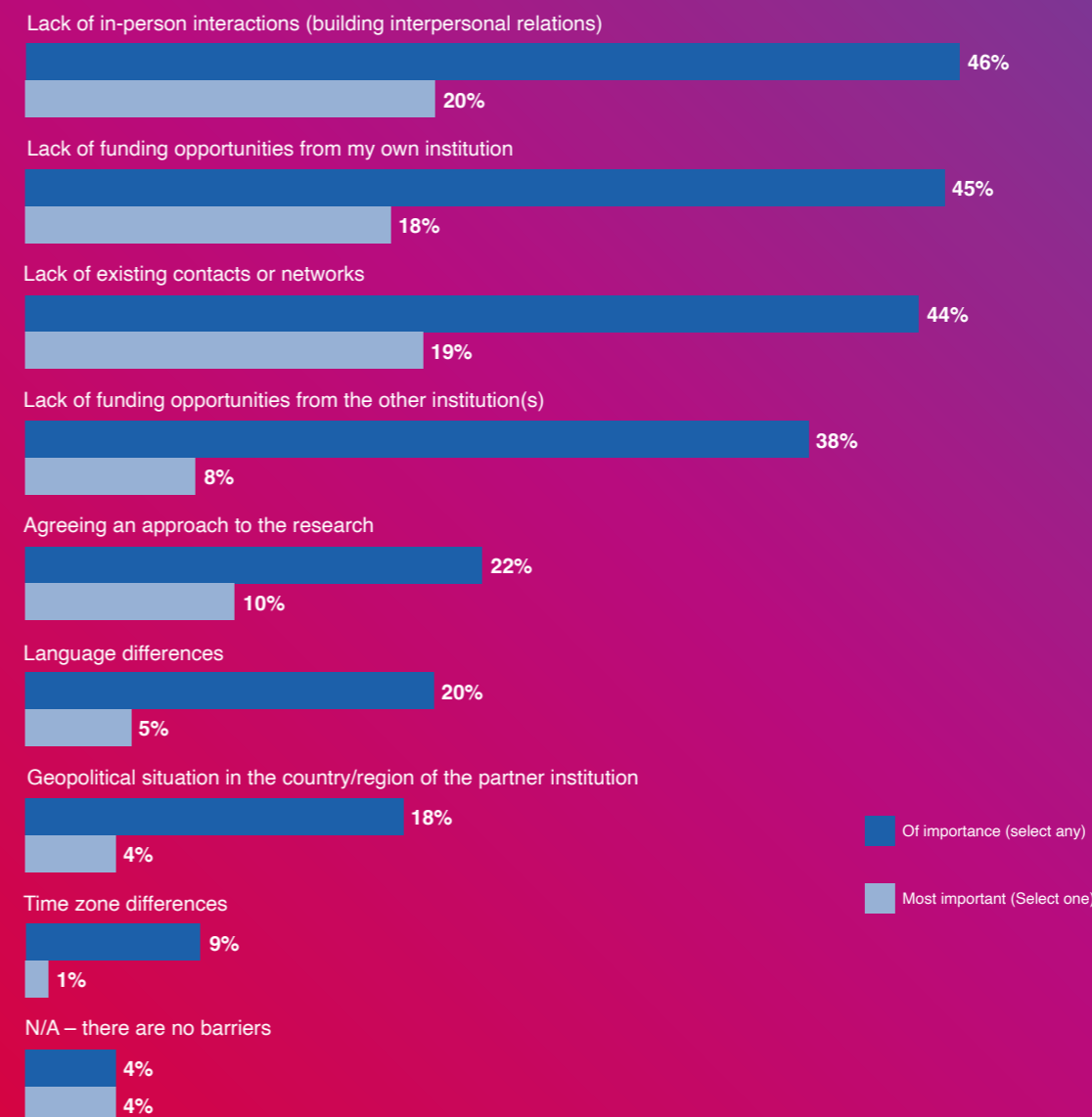
Perhaps unsurprisingly, a lack of funding opportunities from one's own institute was one of the fundamental barriers (identified by 45% as being a significant barrier, with 18% considering it to be the single most important barrier). Regional differences in this regard are notable, with a higher proportion of academics based in South America (61%) and Africa (57%) perceiving this barrier as significant compared to their peers in North America (39%), and Asia (38%). Furthermore, a lack of financing prospects from other institutions is viewed as a significant barrier by 38% of respondents, emphasising the difficulties in acquiring funds to develop and further facilitate collaborations.

Just under a fifth (18%) of academics in our survey identified geopolitical situations in the partner institute's region as a substantial barrier, with only 4% citing this as the single most significant barrier. This proportion was relatively consistent across continents, perhaps reflecting the interconnected nature of global academia.

Taking these findings together, it seems that logistical barriers are much more pervasive than cultural and geopolitical ones, and that early career researchers experience these barriers more acutely.

MOST SIGNIFICANT BARRIERS TO INITIATING A NEW INTERNATIONAL RESEARCH COLLABORATION

Figure 7



ASSESSING THE SUCCESS OF RESEARCH COLLABORATIONS

As discussed earlier in this report, international collaborations are widely sought, not least for the reported benefits of such collaboration on the quality and impact of the resulting outputs. In the survey we wanted to understand how academics themselves reflect on and assess the success of such collaborations.

As shown in Figure 8, the most common ways success of a research collaboration is evaluated is:

- whether the research has meaningfully contributed to their field (75%)
- whether the research is published (65%); and
- whether the research has led to further, repeat collaboration (64%).

It is unsurprising that a key consideration for academics in judging whether a collaboration is successful is if the research has been published. This is consistent with the general theme in academia that to be successful, an academic must publish or, in other words, to 'publish or perish'.⁷

Bibliometric related measures were less common but still important considerations for evaluating the success of a research collaboration. Just under half (48%) of academics in our survey reported that the quality of the journal the research is published in is a consideration, and 45% said whether the researcher is cited by other academics is an important criterion for evaluating the success of a research collaboration. As noted earlier in this report, the enduring influence of "journal prestige" is evident despite efforts to pivot away from this.

There were regional differences in this question showing that academics from different continents may have different priorities in terms of judging the success of a research collaboration. Academics in Europe (32%) and North America (35%) place less emphasis on whether the output of a collaboration has led to a tangible impact beyond academia, compared with academics in South America (48%) and Africa (57%). This may reflect differences in the purpose of the research and its practical application between the continents.

Across all continents, however, the main theme from this question remained the same: that academics prioritise research outputs making meaningful contributions to their fields, over outcomes related to bibliometric measurements.

HOW THE SUCCESS OF A RESEARCH COLLABORATION IS JUDGED

Figure 8



CONCLUSION

Academic research is becoming ever more international, with internationalisation a key tenet of many universities' strategies. International research collaboration can take many forms, involving bilateral and multilateral relationships and collaborations within and across disciplines. Regardless of its form, however, the benefits of such collaborations are numerous and widely reported. These include: increased citations, potentially owing to the greater pooling of expertise and diverse perspectives; opportunities to gain access to specialised equipment; access to new sources of funding; and the input of a more diverse range of perspectives and talent pool.

Our research, utilising survey responses for a large, global sample of academics explored the key factors that scholars look for when seeking a new international collaborator, how they judge research reputation, the enablers and barriers to international collaboration, and how the success of such collaborations are judged.

Key findings from this research include the importance of personal relationships and interactions in establishing such collaborations. Academics most value openness and trust when seeking a new collaborator and that in-person visits, informal networking and in-person conferences are key to initiating new collaborations. As the world emerges from the COVID-19 pandemic and the merits of in-person vs. virtual events are weighed up, our findings demonstrate the wider benefits that may emerge from institutions facilitating in-person events and networking among researchers.

Individual scholarly reputation is also an important consideration when identifying potential collaborators. When considering how academics form judgments on reputation, the importance of personal interactions was again evident and emphasises the importance of facilitating in-person networking. Despite some scepticism over "journal prestige", the importance attached to where an academic publishes was nevertheless evident in how academics assess the reputation of other researchers. With the increasing shift to 'open science' in recent years, it might be assumed that deriving reputation from where academics publish might be lessened but for now it seems that old habits die hard and a significant amount of kudos is given to academics who publish in prestigious journals.

Given the numerous benefits attributed to international research collaboration, understanding the barriers to initiating such collaboration is important. Our research shows, again, the importance of facilitating and removing barriers to allow in-person networking. It also highlights the need for extra support for early career researchers in establishing and growing their network of contacts. ■

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