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“Wissenschaft weltoffen 2024”

Since 2001, the DAAD has been analysing data on the internationalisation of studies, research and higher education from Germany as well as from particularly relevant countries and regions such as the USA, the United Kingdom or Asia. The current edition presents the most important results and graphics.

These include figures on international students in Germany, data on mobility behaviour, an overview of students' countries of origin and host countries as well as developments in the field of doctorates. Special data analyses shed light on the status quo and trends at universities and research institutes during the Covid-19 pandemic.

The study integrates international data from OECD and UNESCO as well as national data from the Federal Statistical Office in Germany. In combination with other indicators, it provides a valid basis for long-term analyses.

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A guest article by Gregor Fabian and Christophe Heger



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The science system in Germany has been facing major challenges for several years. Academics and researchers' views on its current state are thus of considerable interest. The results show that international researchers generally regard the science landscape in Germany in a more favourable light than their German colleagues: international academics and researchers are, in some cases, much more disposed to rate all aspects of the science system positively ("good" and "very good") than German academics and researchers.

On the whole, both German and international academics and researchers hold the autonomy and freedom of research of the German science system in (very) high esteem, along with the social relevance of research, its innovative capacity and the cohesion of the scientific community. Nonetheless, certain aspects are only considered positive by a minority. This critical view is solely found among German researchers, however. These aspects are the balance between research and teaching (only 44% favourable responses), the appreciation in society at large (43%) and the assessment of performance equity in the scientific system (32%). This is in contrast with the perceptions of international academics and researchers, more than half of whom rate the above aspects positively.

Database

Regularly conducted, the Scientists Survey is a representative study on the working and research conditions of professors, postdocs and doctoral students from all fields at German universities with the right to award doctorates. The study focuses on the research and working conditions of academics and researchers at universities, their assignments and professional aspirations as well as current topics in science policy.¹ In total, some 11,371 respondents, including 15% with an international background, took part in the most recent study in 2023.

Respondents were also asked to evaluate the research situation in their own field, including its international relevance, the requirement for third-party funding, the pressure to publish and competition among researchers. Assessments of these aspects of the research situation are virtually the same among international and German academics and researchers. The international relevance of their own field is considered high by researchers from both groups (62% vs. 60%). However, this

DS1 Share of positive ratings of selected aspects of the German science system, by German and international academics and researchers, in 2023

International academics and researchers in %	Aspects of the science system	German academics and researchers in %
85.1	Academic freedom and autonomy	78.7
70.9	Social relevance of research	63.9
73.4	Innovative capacity	60.7
60.8	Cohesion of the academic community	57.0
58.7	Ratio of research and teaching	43.8
63.8	Appreciation in society	42.6
58.5	Performance equity	31.5

Shares in %, values 3 + 4 on a four-point scale from 1 = very poor to 4 = very good

Source: DZHW, Scientists Survey 2023

also applies to their perceived obligation to acquire research funds (56% vs. 63%) and to their impression of the competition between colleagues (60% vs. 62%). Overall, the findings suggest that researchers from all backgrounds face the same high demands in their day-to-day research work.

“International postdocs spend more time on research-related activities.”

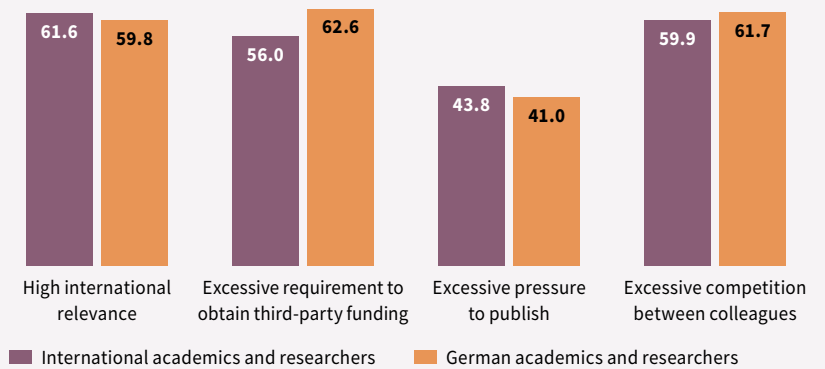
The working time available for academics and researchers' various tasks is one of the central conditions of employment at universities. In most cases, the hours actually worked per week are significantly higher than those contractually agreed.² The range of activities mainly consists of research, teaching and supervision. Other important aspects are attracting external funding, general representation on boards, assessments and management tasks. Although the scope of individual activities may vary significantly, depending on the career status of the researcher, there are only minor differences between international and German researchers within the status groups in terms of their total weekly working hours (professors 51 vs. 53 hours per week, postdocs 45 vs. 44 hours per week and doctoral students 41 vs. 40 hours per week).

Figure DS3 shows the average percentage distribution of activities by status group for German and international academics and researchers. For professors, there is little variation between the two groups in the distribution of activities. Whilst German professors generally spend

slightly more time on academic self-administration and somewhat less on research, teaching and supervision, there are no noteworthy differences between these two groups. The average activity profiles of German and international professors are almost identical.

A different picture emerges for postdocs and doctoral students: international postdocs are much more likely to work in a highly research-based environment. At 46%, their research share is almost 15 percentage points above that of German postdocs, thereby occupying on average just under half of their total working time. The shares of other activities, especially teaching duties and management tasks, are accordingly lower for international postdocs. By contrast,

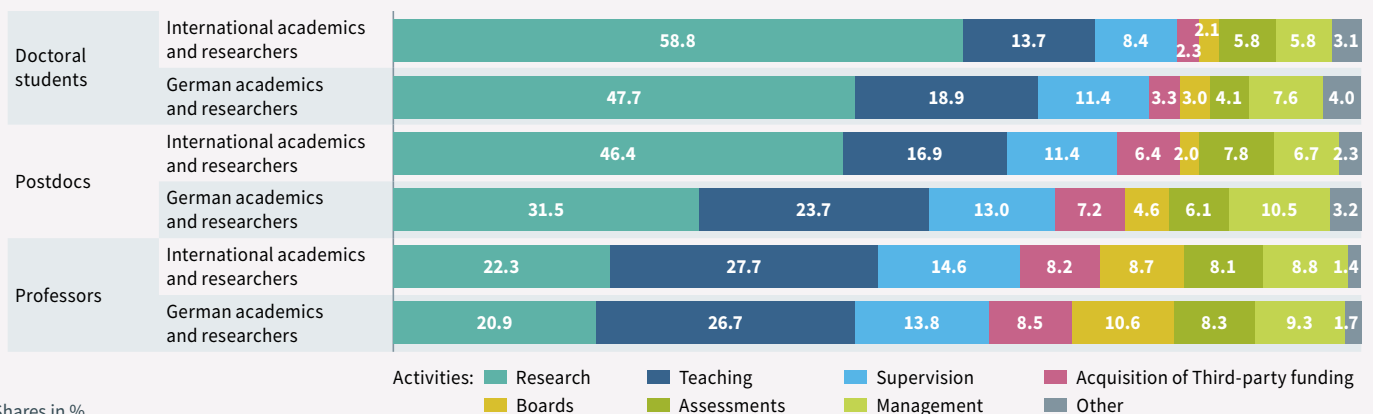
DS2 Rating of selected aspects of the research situation in their own field, by German and international professors, in 2023



Shares in %, values 4 + 5 on a five-point scale from 1 = "irrelevant" to 5 = "at the forefront" and from 1 = "far too low" to 5 = "far too high"

Source: DZHW, Scientists Survey 2023

DS3 Activity profiles of German and international academics and researchers, by status group and type of activity, in 2023³



Shares in %

Source: DZHW, Scientists Survey 2023

DS4 Discrimination experienced by German and international academics and researchers, in 2022 and 2023

International academics and researchers in %	Discrimination experienced with respect to	German academics and researchers in %
16	... Ethnic background	1
13	... Sex/gender identity	15
2	... Religion or world view	1
6	... Age	7
1	... Sexual orientation	1
2	... Disability or chronic illness	2
6	... Social background	3
70	No discrimination experienced	78

Source: DZHW, Scientists Survey 2023

international postdocs tend to spend more time on assessments (8% vs. 6%). The activity profiles of German and international doctoral students also vary considerably in the distribution of their working hours between individual tasks. While German doctoral students devote an average of 30% of their working hours to teaching and supervision, these activities account for just 22% of their international colleagues' working time. In contrast, the average research shares among international doctoral candidates (59%) are significantly higher than those in the German group (48%).

In consequence of their often different ethnic background and migration experience, the issue of discrimination in the German scientific system is particularly acute for international researchers. In fact, some 30% of international academics and researchers report having experienced discrimination in the workplace during the last 24 months with respect to one or more categories, compared to 22% of their German counterparts. The main reason for this disparity is that international researchers are much more likely to face discrimination on account of their ethnic origin than Germans (16% vs. 1%). Both groups are equally affected by sexual discrimination, although it is almost exclusively women who report having been discriminated in this way (13% vs. 15%). International academics and researchers experience the same discrimination regardless of their status: the proportions of the aspects surveyed differ only slightly between the groups. By their own assessment, professors alone are discriminated against due to their ethnic background somewhat less frequently than doctoral candidates and postdocs.

“ International doctoral students and postdocs are more inclined to aim for a professorship than their German counterparts.”

On the whole, despite the differences in their job profiles and working conditions, German and international researchers at universities in Germany are satisfied with many factors of their professional activity. However, the higher proportion of working time devoted by international researchers to research activities is obviously reflected in their satisfaction ratings for this field of work. Thus, both international

postdocs and international doctoral candidates are considerably more satisfied with their research activity than their German colleagues. At 13 percentage points (postdocs) and 16 percentage points (doctoral students), the frequency of their favourable ratings is higher than in the German group. Even controlling for sex, specialist field and actual hours

worked, the disparity remains stable and statistically highly significant. One aspect of job satisfaction that is viewed most critically by both status groups below the level of professor is professional development. This is partly due to the uncertain career opportunities in the science landscape. Nonetheless, when comparing German and international researchers below professorship level, it becomes apparent that international postdocs and doctoral students are somewhat more satisfied – albeit at a low level – with their career prospects than their German colleagues.

* Footnotes

- 1 Fabian et al. (2024).
- 2 Ambrasat (2019).
- 3 Deviations from 100% are due to rounding.

DS5 Satisfaction of German and international academics and researchers with selected aspects of their professional activity, by status group and type of activity, in 2023³

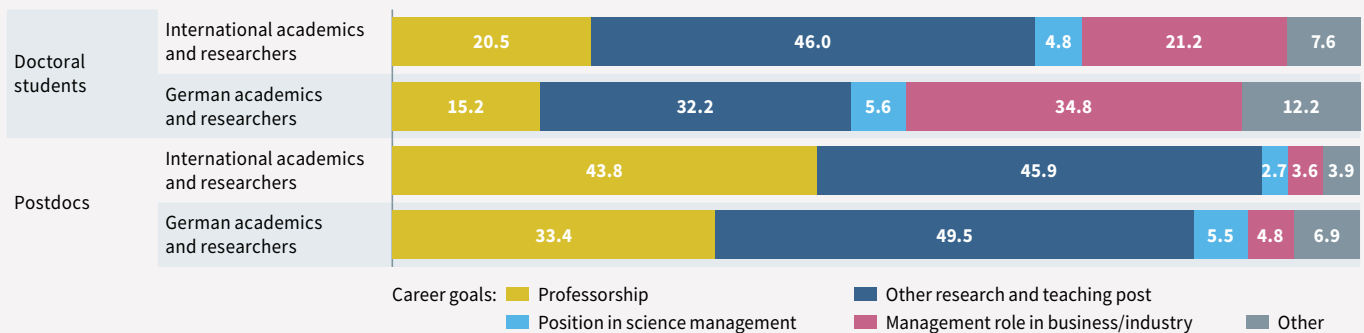
Aspects of professional activity	Doctoral students		Postdocs		Professors	
	International academics and researchers	German academics and researchers	International academics and researchers	German academics and researchers	International academics and researchers	German academics and researchers
Teaching	56.1	59.7	62.7	67.3	67.9	69.8
Research	64.0	48.1	62.4	49.0	58.5	52.4
Relationship with colleagues	70.3	73.0	68.4	71.1	63.6	64.4
Position attained	50.3	46.5	39.0	40.4	74.8	77.9
Career prospects	43.5	36.5	29.3	24.9	56.4	56.5
Realisation of ideas	54.4	51.7	54.9	52.9	69.1	64.9
Overall satisfaction	51.1	42.4	40.1	43.1	63.9	63.5

Shares in %, values 4 + 5 on a five-point scale from 1 = very dissatisfied to 5 = very satisfied
 Source: DZHW, Scientists Survey 2023

Researchers with and without a doctorate have differing career goals. While most postdocs aspire to a professorship or another (permanent) position in research and teaching, a large proportion of doctoral candidates also consider taking up a post outside academia. However, international doctoral students who work and conduct research in Germany are far more likely than German doctoral candidates to pursue a long-term career in academia (67% vs. 47%). The career goals of German and international postdocs differ mainly in that the latter group are much more inclined to seek a professorship.

In summary, it is clear that, to a large extent, German and international professors view their research situation in the same way. Their activity profiles and job satisfaction diverge only slightly. The situation is very different for international doctoral students and postdocs compared to their German colleagues. International academics and researchers below the level of professor tend to aim for a long-term career in academia, they are generally able to devote more working time to research and are more satisfied with some professional aspects (research activity, career prospects) than their German counterparts. Despite experiencing discrimination in the workplace relatively frequently, they rate the German science system more favourably than German researchers.

DS6 Career goals of German and international academics and researchers, by status group and type of activity, in 2023³



Shares in %, values 4 + 5 on a five-point scale from 1 = very dissatisfied to 5 = very satisfied
 Source: DZHW, Scientists Survey 2023