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## **Internationalisation of universities of applied sciences**

**Current status, empirical findings and outlook**

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## 1. Introduction

In 2019, universities of applied sciences (UAS<sup>2</sup>) in Germany celebrate a significant anniversary: 50 years earlier, the first UAS was founded in Schleswig-Holstein. The UAS model came into being as a practice-related higher education institution. Since they were first founded, UAS have developed rapidly. Nowadays there are well over 200 UAS throughout Germany. Their growing importance and popularity are reflected in the sharp increase in student numbers, which have grown from some 400,000 to around one million in the last 20 years alone.

The growing importance of UAS has led to more attention being paid to the question of internationalisation in this type of higher education institution.<sup>3</sup> It is frequently assumed that, in most fields, traditional universities have a higher level of internationalisation than UAS. However, there is much evidence to suggest that UAS have also been caught up in a general race for internationalisation and that internationalisation has become a matter of growing importance for them, too (Thimme 2014: 1 ff.).

To date, however, there has been no detailed empirical assessment of the state of internationalisation at the German UAS. Furthermore, there has been no extensive analysis of the strategic orientation of internationalisation at UAS. This working paper seeks to close this gap and systematically examine internationalisation at UAS. Chapter 2 describes the UAS model as well as current trends and developments beyond internationalisation. Chapter 3 discusses the current state of internationalisation at UAS and Chapter 4 the (strategic) orientation of internationalisation and obstacles to creating international UAS. The findings are then addressed in the conclusion. The paper intends to contribute to the further goal-driven internationalisation of UAS.

## 2. The UAS model in Germany: origins, development and current trends

Since they were founded at the end of the 1960s, UAS have become important stakeholders in Germany's higher education system. They were established following a long negotiation process. On 31 October 1968, in response to social needs and the needs of the labour market, the state premiers in West Germany signed an agreement to standardise the higher education system and introduce a new type of higher education institution, the *Fachhochschulen* (Holuscha 2013:117 ff.).<sup>4</sup> The aim was to establish in the long term "institutions in the tertiary education sector [...] that offer practice-oriented training on an academic basis, qualifying students to work independently in their respective profession" (Science Council 2010b: 17). This definition clearly shows the traditional boundaries between UAS and universities. Universities constitute the traditional type of higher education institution in Germany. They are characterised by a wide range of subjects and the link between teaching and basic research.

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<sup>2</sup> In this publication, UAS stands for all universities of applied sciences in Germany, excluding public administration colleges, which need to be viewed separately due to their special features.

<sup>3</sup> Internationalisation involves an all-embracing, ongoing process: "Internationalization of higher education is the process of integrating an international/ intercultural dimension into the teaching, research and service of the institution" (Knight 1993: 21). Thus, internationalisation can be understood as the "systematic endeavour of state policy on higher education and higher education institutions to shape university organisations and management and, in particular, higher education so that they are better equipped to meet the challenges of economic globalisation and related social changes" (Schreiterer & Witte 2001: 5).

<sup>4</sup> Following the reunification of Germany in 1990, comparable institutions in the GDR – engineering colleges, a large number of technical universities and some engineering schools – were converted to universities of applied sciences. One special feature was the fact that the former technical universities in the GDR had the right to confer their own doctorates and professorial teaching qualifications but the newly founded UAS did not. In addition to the converted UAS, a wave of new UAS were established in the 1990s, primarily in the eastern states (BMBF 2004: 19 ff.).

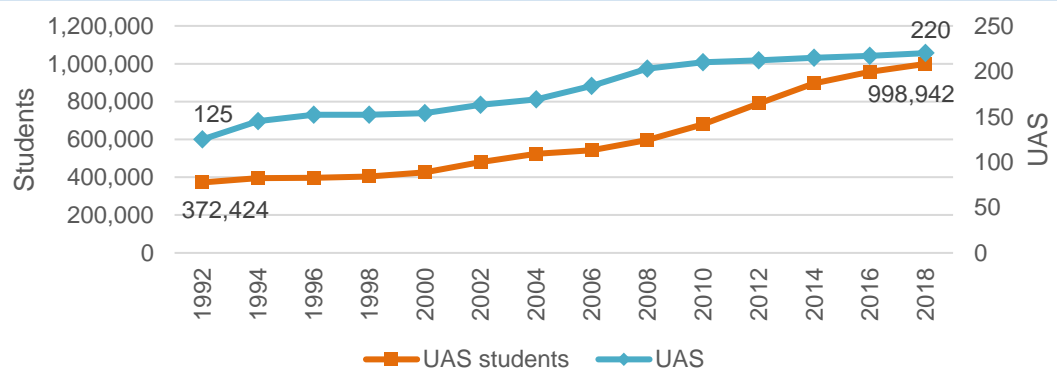
UAS, on the other hand, were defined “by a special focus on application and shorter periods of study” (Science Council 2010b: 17).

In some respects, however, the two types of higher education institution are converging. The aspiration of UAS to change their position and status within the higher education sector and their research ambitions play a key role (Holuscha 2013:22 ff.). New differentiations and harmonisation processes in the higher education system are leading to new similarities and differences in some areas. As a result, a clear division of tasks and the classic division between universities and UAS can no longer be observed in practice (Ziegele/ Roessler/ Mordhorst 2017: 3).

The fact that many UAS have changed their names from “Fachhochschule” to “Hochschule für angewandte Wissenschaften” (university of applied sciences) and now add the English term “University of Applied Sciences” to their names has contributed to enhancing the image of UAS and to further breaking down the binary typology of universities versus UAS.

Over the course of time, UAS have gained in importance in Germany’s higher education landscape. This was driven by the formal equality of qualifications conferred by universities and UAS in the wake of the Bologna Reform. As a result, student numbers increased: in the last ten years, there has been an increase of 67% in student numbers at UAS compared to an increase of about 30% at universities. An analysis of increasing student numbers since 1992 demonstrates this growth even more clearly: in this period, numbers rose by about 168% from 372,000 to almost 1 million in the 2018/2019 winter semester. This means that 34.8% of the approx. 2,870,000 students in Germany are enrolled at UAS. In the same period, the number of UAS also nearly doubled from 125 to 220 (Figure 1).

**Figure 1: UAS development and UAS student numbers (1992–2018)**



Source: Federal Statistical Office of Germany (Destatis); special evaluations by the DAAD

Like universities, UAS differ greatly in terms of size. There are many small higher education institutions, with just under 150 UAS having fewer than 5,000 students. Many of the small UAS are private or church sponsored. In the 2017/2018 winter semester, there were 107 public UAS (49%), 95 private UAS (43%) and 18 church sponsored UAS (8%) in Germany.

In the 2017/2018 winter semester, the distribution of students at the different UAS types was as follows:

- 755,998 students at a public UAS (77%)
- 202,240 students at a private UAS (20.6%)
- 23,950 students at a church sponsored UAS (2.4%)

The numerical trend and the growing political significance of UAS is especially related to their focus on a labour market-oriented approach and innovation in academic education. The demand for practice-oriented academic education is due to the changing needs of the labour market, the economy and the students themselves as well as Germany's ongoing shortage of trained professionals.

However, a study by the German Centre for Higher Education Research and Science Studies (DZHW) analysing UAS staffing situation concludes that UAS have problems appointing professors as there is often a lack of satisfactory applicants and the candidates often lack the formal qualifications necessary for appointment. Therefore, only just over half the advertised UAS professorships are filled after the first call for applications. More or less every third professorship is advertised several times, and more than every sixth professorship remains vacant despite several calls for application (DZHW: 2017: 19 ff.). In order to address this phenomenon, funds were made available by the Federal Ministry of Education and Research (BMBF) in 2019 to develop measures for the recruitment and professional development of UAS professorial staff (BMBF 2019: 1 ff.).

Despite the obstacles to appointing professors, UAS research has gained in importance in the past years. Many professors are involved in practice- and application-oriented research projects. Research enables professional practice to feed into application-oriented teaching. The importance of UAS is clearly shown by the fivefold increase in funding for the BMBF programme "Research at UAS" over the last 15 years, which amounted to 56 million euros in 2019. The programme targets content-related and structural research challenges at individual UAS.<sup>5</sup> Nevertheless, the share of research funding raised by UAS is far below that of universities. The German Research Foundation (DFG) grants public research funds amounting to more than 2.6 billion euros each year to universities. UAS, on the other hand, receive little more than 100 million euros from federal government and the DFG together. This is primarily due to the fact that the DFG, which provides most of the research funding, focuses mainly on basic research, an area outside the core strengths of UAS (Roessler 2018: 62 ff.). It should be noted that, in addition to public research funding, both UAS and universities receive third-party funding from industry.

The opportunities for UAS graduates to undertake doctoral studies have continued to develop. Due to the legal equality of Master's degrees conferred by universities and UAS, Master's graduates from UAS are entitled to study for a doctorate. They can follow a cooperative PhD programme, in which universities and UAS work together and UAS professors act as supervisors, experts and examiners. In order to systematically institutionalise the cooperative PhD programmes organised by universities and UAS, research centres have been established and clear rules integrated in the university regulations and the doctoral degree regulations of the faculties and departments. Recent surveys, carried out annually by the German Rectors' Conference (HRK), clearly show that the number of doctorates completed by UAS graduates continues to increase. In the 2015–2017 graduation years, at least 1,575 UAS graduates completed their doctorate. The systematic institutionalisation of cooperative PhD programmes is found at many higher education institutions; however, this is not the case everywhere (HRK 2019: 5 ff.). Besides this, there has been a change to UAS right to confer doctorates in the state of Hesse: in 2016, the higher education act was amended so that research-intensive subject areas could gain the right to confer doctorates. Thus, in 2016, Fulda University of Applied Sciences was the first UAS to gain the right to confer their own doctoral degrees (CHE 2019: 12 ff.).

It is not only within Germany that the UAS study model is gaining attention and momentum; awareness is also growing abroad. This is demonstrated by the fact that higher education institutions modelled on German UAS are being established abroad and the practical application of teaching and research adopted (CHE 2019: 23 ff.). High UAS participation in TNE

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<sup>5</sup> <https://www.bmbf.de/de/forschung-an-fachhochschulen-543.html>

projects clearly shows the high international standing of the UAS study model (DAAD 2019b: 3 ff.).<sup>6</sup>

### 3. UAS internationalisation: empirical findings

In addition to growing demand from abroad, the relevance of the topic of internationalisation is also growing within UAS themselves. In 2018, for example, 75% of UAS declared that internationalisation had gained in importance in the last five years.<sup>7</sup> The growing importance of UAS internationalisation is also reflected in the DAAD programme “UAS. International”, which was launched in 2019.<sup>8</sup> The BMBF-funded programme is aimed directly at UAS and is intended to drive extensive, sustainable internationalisation in the long term and make the UAS model better known abroad. This will serve to strengthen the competitiveness of UAS as well as the links between science, industry and society. The programme also helps prepare students for the internationally oriented labour market.

With their increasingly international orientation, UAS are responding to new challenges such as globalisation and increasing competition in the higher education sector. In order for internationalisation to be successful as part of institutional profile development, however, UAS not only need to have a corresponding positive attitude but also to take systematic action and target resources – in other words, they need a strategy (Bode 2012: 7 ff.).

Varying degrees of internationalisation among the different UAS and in comparison with universities can be attributed to differing framework conditions, such as size, funding body, location and the range of study programmes offered. These differences and their effects on internationalisation are explored below.

The internationalisation status of German UAS, especially as compared to universities, is examined on an empirical basis in the following. The analysis uses publicly accessible data from existing data sets at research organisations and the Federal Statistical Office of Germany, especially from the two projects “Wissenschaft weltoffen 2019. Facts and Figures on the International Nature of Studies and Research in Germany” and “The Internationality of Germany’s Higher Education Institutions. Profile Data Survey for 2018”. The DAAD is responsible for both these projects.<sup>9</sup>

<sup>6</sup> The term transnational education (TNE) encompasses higher education institutions, degree programmes and individual study modules offered abroad mainly for students of the respective country or region, for which a higher education institution of another country is essentially academically responsible. (DAAD 2019b: 3 ff.).

<sup>7</sup> Source: DAAD survey of DAAD member universities.

<sup>8</sup> <https://www.daad.de/en/information-services-for-higher-education-institutions/further-information-on-daad-programmes/uasinternational/>

<sup>9</sup> “Wissenschaft weltoffen” (<http://www.wissenschaft-weltoffen.de/>) is an essential source of information on the international mobility of students and researchers and the profile data project (<https://www.daad.de/der-daad/analysen-und-studien/profildaten/de/50710-profildaten-zur-internationalitaet-deutscher-hochschulen/>) collects data on internationality at German higher education institutions. The studies are published in cooperation with various research institutions.

The two projects, and consequently this working paper, use the following data: Federal Statistical Office of Germany (Destatis): student statistics, examination statistics, personnel statistics and higher education finance statistics; mobility within the Erasmus programme: student mobility (outgoings and incomings) and lecturer mobility (outgoings and incomings); DAAD funding figures: Individual funding and expenditure on projects and programmes; excerpts from the HRK Higher Education Compass: international cooperation agreements, international degree programmes, English-language degree programmes and double degree programmes at German higher education institutions; Alexander von Humboldt Foundation: data on scholarship holders and award winners, EU Office of the Federal Ministry of Education and Research (BMBF): funding from the EU framework programme Horizon 2020; online survey of German higher education institutions: A variety of key figures on the internationality of teaching and academic studies, research, administration and infrastructure.

In this publication, the degree of internationalisation is measured by way of example, using individual key internationalisation indicators that represent key internationalisation areas.<sup>10</sup> These are:

- The international mobility of students and academics (e.g. Bildungsauslaender<sup>11</sup>, professors and academic and artistic staff of foreign nationality)
- Mobility within the Erasmus programme (e.g. outgoing and incoming Erasmus guest lecturers and outgoing Erasmus students on placement)
- Participation in national funding programmes for the internationalisation of higher education institutions (e.g. individual DAAD funding recipients and DAAD funding)
- Internationalisation of curricula (e.g. internationally oriented degree programmes<sup>12</sup>)
- International university partnerships (e.g. international cooperative partnerships outside the Erasmus programme)
- Procurement of EU third-party funding

In order to compare UAS with universities more easily and to differentiate between UAS, UAS are clustered into “large UAS” (more than 5,000 students) and “small UAS” (less than 5,000 students) in some sections and descriptions.<sup>13</sup> In the 2017/2018 winter semester, there were 72 large UAS and 148 small UAS in Germany.<sup>14</sup> If this clustering offers no further insights, the two UAS clusters are considered collectively.

The analysis of internationalisation indicators results in four fundamental findings; these findings are described in more detail and explained in the following chapters.

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**Finding 1:** UAS internationalisation has developed positively in absolute figures.

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**Finding 2:** The degree of internationalisation differs widely among the group of UAS.

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**Finding 3:** In most areas, UAS have a lower degree of internationalisation than universities.

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**Finding 4:** UAS are frequently under-represented when it comes to public funding.

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<sup>10</sup> The internationalisation indicators used here correspond to those used in the profile data report.

<sup>11</sup> Bildungsauslaender are students of foreign nationality who gained their qualification for admission to higher education from a school abroad or who have attended a German preparatory college to supplement qualifications gained at a school abroad. Bildungsinlaender are also students of foreign nationality who, however, gained their higher education entrance qualification at a school in Germany or have passed a gifted students test or an aptitude test in Germany. Therefore, they do not count towards mobility, at least not initially. Bildungsinlaender and Bildungsauslaender, i.e. all students who are not German nationals, are referred to as international students.

<sup>12</sup> All degree programmes at higher education institutions in Germany are registered in the HRK Higher Education Compass and international degree programmes can be labelled as such. It should be noted that the validity and comparability of this indicator is impaired due to the lack of a consistent definition and inconsistency of use by the higher education institutions. Irrespective of classification by the higher education institutions, all English-language degree programmes are classified as international in the analysis of the HRK Higher Education Compass if English is given as the main language of instruction.

<sup>13</sup> The clusters used here correspond to those in the profile data report.

<sup>14</sup> Source: DAAD & AvH & HRK (2019): Internationality at German higher education institutions. Profile data survey for 2018; special evaluation by the DAAD.

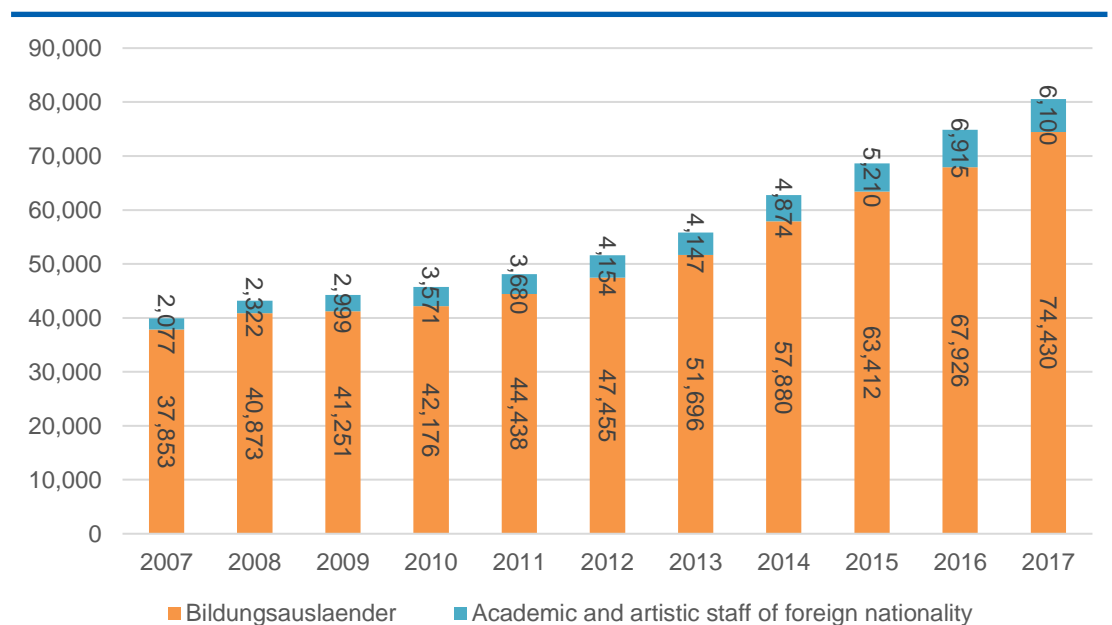


### 3.1 Finding 1: Positive development of internationalisation in absolute figures

In absolute terms, the key internationalisation indicators at UAS have shown significant increases in the last few years.

This dynamic development can be seen, for example, in the sharp rise in the number of Bildungsauslaender among the students at UAS. This number increased to approx. 74,000 in 2017 and has thus nearly doubled since 2007 (Figure 2). There are similar results for the development of academic and artistic staff of foreign nationality at UAS. The number almost tripled in 10 years between 2007 and 2017 to 6,100 individuals (Figure 2).

**Figure 2: Development of the number of Bildungsauslaender as well as academic and artistic staff of foreign nationality at UAS in the period 2007–2017 (in absolute figures)**



**Source: Federal Statistical Office of Germany; special evaluation by the DAAD**

The increasing number of partnerships (outside Erasmus) per professorship and the increase in internationally oriented degree programmes at UAS also demonstrate a positive development in the degree of internationalisation at UAS. In 2008, there was only about one in five UAS professorships with at least one international partnership. In 2018, however, there is one cooperation agreement outside Erasmus for every third UAS professorship (Figure 3).



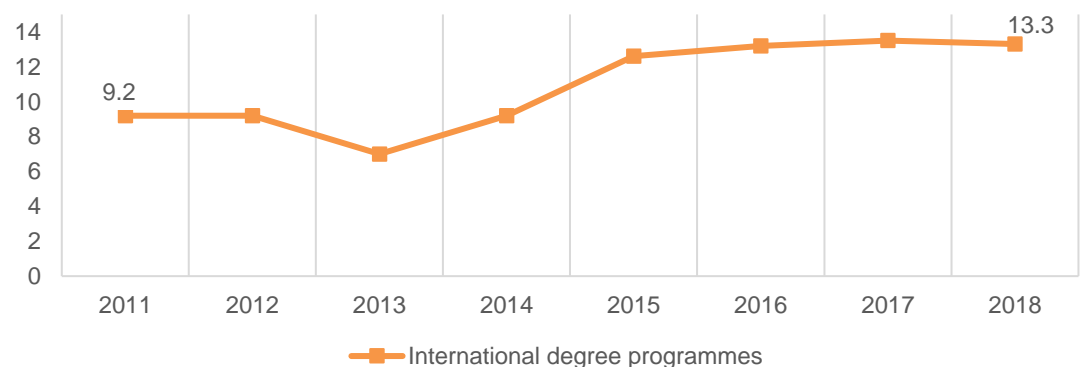
**Figure 3: Development of international partnerships (outside Erasmus) per UAS professorship since 2008 (average)**



Source: HRK Higher Education Compass and HRK information portal “International University Partnerships”; special evaluation by the DAAD

In June 2018, there was a total of 19,312 degree programmes in Germany, 11% of which were classified as “international” by the higher education institutions. In the last 10 years, the number has more than doubled (from 931 in 2009 to 2,232 in 2018). Measured against the total number of degree programmes, the increase in internationally oriented degree programmes at UAS since 2011 has not been steady, but it has been significant overall. In 2011, only one in 11 UAS degree programmes was classified as international, whereas by 2018 this was the case for every seventh or eighth programme. Thus, international degree programmes now account for 13.3% of all UAS degree programmes (Figure 4).<sup>15</sup>

**Figure 4: Development of the proportion of international UAS degree programmes since 2011 (in percent)**



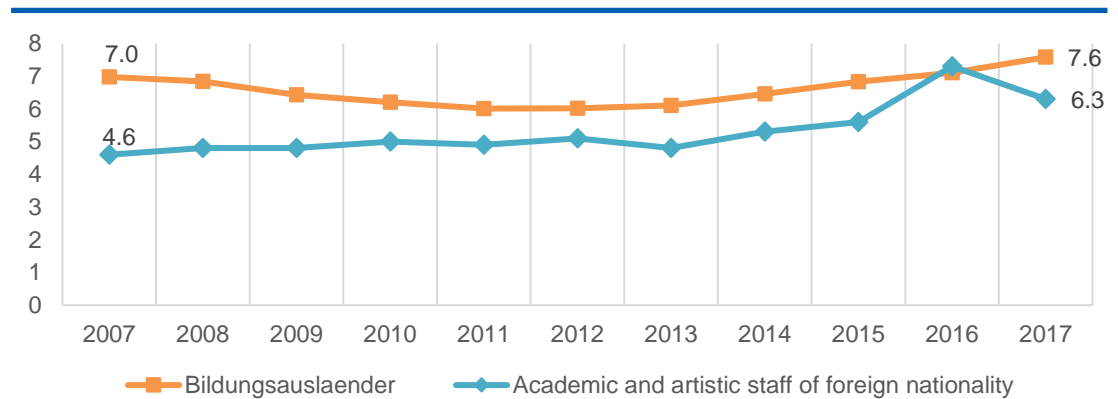
Source: HRK Higher Education Compass and HRK information portal “International University Partnerships”; special evaluation by the DAAD

It should be borne in mind, however, that the positive internationalisation trend must be put into perspective against a sharp overall increase in student and staff numbers; in other words, internationalisation is growing in absolute terms, but not in relative terms. For example, the proportion of Bildungsausländer in the total number of students hardly changed from 2007 to 2017 and remains 7.6% (Figure 5). This is due to the strong rise in the number of German students in the same period (approx. 78.7%). Compared to other types of higher education

<sup>15</sup> Data on internationally oriented degree programmes has only been collected in this form since 2011 and can thus only be shown from then onwards.

institution, the average proportion of foreign nationals among the academic and artistic staff at UAS was relatively low from 2007 to 2017 (5.3%) (Figure 5). The sharp overall increase in the number of students and academic and artistic staff at UAS thus puts the dynamic development of internationalisation at German UAS into perspective.

**Figure 5: Development of the proportion of Bildungsauslaender as well as academic and artistic staff of foreign nationality at UAS in the period 2007–2017 (in percent)**



Source: Federal Statistical Office of Germany; special evaluation by the DAAD

### 3.2 Finding 2: Varying degrees of internationalisation among UAS

An analysis of UAS and UAS internationalisation shows that they do not form a homogeneous, but an extremely heterogeneous, group, as can be seen in the great differences in the degree of internationalisation among UAS.

For example, the heterogeneous nature of internationalisation at UAS is demonstrated by the proportion of Bildungsauslaender. In 2017, the spread between UAS with the highest and lowest percentage – in other words, the difference between the highest and the lowest value in the distribution – was 79.5 percentage points (Table 1). That means that there are some UAS without any Bildungsauslaender enrolled; on the other hand, there are others with a very high proportion of Bildungsauslaender. This is mainly due to individual, generally very small, higher education institutions that attract international students in large numbers. Consequently, there is a marked disparity between a small group of UAS with a high degree of internationalisation and two bigger groups, one of which is internationalised to an average extent and the other hardly at all. This tendency can be seen in the percentage distribution of outgoing Erasmus guest lecturers from Germany in the 2016 Erasmus year (measured against the total number of full-time teaching staff in 2016) with a spread of 72.0 percentage points and the percentage distribution of outgoing Erasmus students from Germany in the 2015 Erasmus year (measured against the total number of all graduates at bachelor and master levels in the 2015/16 winter semester) with a spread of 51.9 percentage points (Table 1).<sup>16</sup>

<sup>16</sup> Under the Erasmus+ programme, the contract period for mobility measures was extended from 16 months previously to 24 months. The 2015 Erasmus year covers the period from 1 June 2015 to 31 May 2017 and the 2016 Erasmus year the period from 1 June 2016 to 31 May 2018.

**Table 1: Distribution of the proportion of Bildungsauslaender in 2017, outgoing Erasmus guest lecturers in 2016 and outgoing Erasmus students in 2015 at UAS (in percent)**

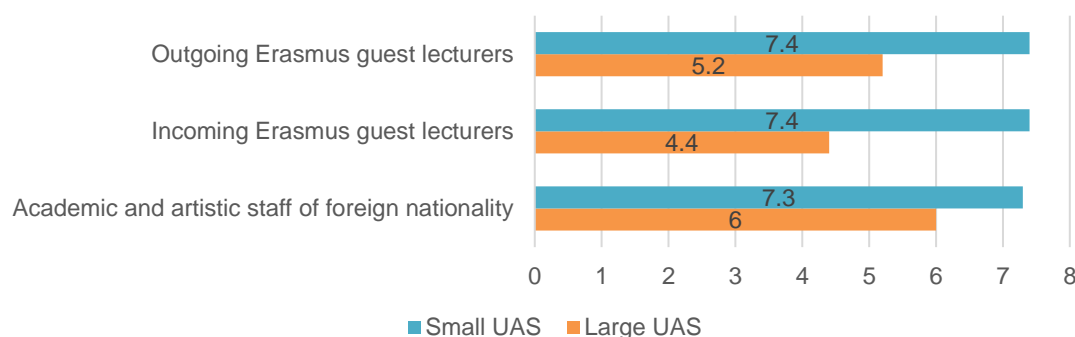
	Average	Minimum	Maximum	Spread
Bildungsauslaender	7.6	0.0	79.5	<b>79.5</b>
Outgoing Erasmus guest lecturers	6.7	0.0	72.0	<b>72.0</b>
Outgoing Erasmus students	5.0	0.0	51.9	<b>51.9</b>

Source: DAAD and Federal Statistical Office of Germany; special evaluation by the DAAD

Student numbers, funding body and subject areas offered can have an impact on the degree of internationalisation. It thus makes sense to cluster UAS into “large UAS” and “small UAS” as they have different tendencies, depending on the internationalisation indicators.

It can be seen that in 2017 the proportion of Bildungsauslaender at large UAS (7.8%, in absolute figures: 57,565 Bildungsauslaender) is greater than at small UAS (6.8%, in absolute figures: 16,865 Bildungsauslaender). On the other hand, in terms of outgoing and incoming Erasmus guest lecturers, for example, small UAS have a relatively high level of internationality. Thus, the proportion of incoming Erasmus guest lecturers in the total number of full-time teaching staff is three percentage points higher than at the large UAS (Figure 6). As regards the proportion of academic and artistic staff of foreign nationality, the small UAS also have a higher degree of internationalisation in 2017 than the large UAS. At the small UAS, for example, 7.3% of these staff are foreign nationals (in absolute figures: 1,745 persons); at large UAS, on the other hand, only 6% (in absolute figures: 4,355 persons) (Figure 6). It is thus clear that UAS size is not necessarily the decisive factor for the development of all internationalisation areas; on the contrary, the degree of internationalisation may vary depending on the internationalisation indicators.

**Figure 6: Proportion of incoming and outgoing Erasmus guest lecturers in 2016 and proportion of academic and artistic staff of foreign nationality in 2017 according to UAS size (in percent)**



Source: DAAD, European Commission and Federal Statistical Office of Germany; special evaluation by the DAAD

It should be taken into account in the data presented here that there are great differences in the degree of internationalisation within the clusters of small and large UAS. The heterogeneous nature of the clusters, especially in the case of the small UAS, can be seen, for example, in the large variation in the proportion of Bildungsauslaender. Thus, in 2017, there was a spread of

40.4 percentage points between UAS with the highest and the lowest proportion of Bildungsauslaender in the cluster of large UAS and as high as 79.5 percentage points in the cluster of small UAS (Table 2). This effect can also be seen in the percentage distribution of outgoing Erasmus guest lecturers from Germany in the 2016 Erasmus year. Once again, it is the cluster of small UAS that is especially heterogeneous (spread of 72.0 percentage points between those with the highest and the lowest proportion), whereas the large UAS have a spread of 26.3 percentage points between individual UAS (Table 2). The spread between the highest and the lowest proportion of outgoing Erasmus students from Germany in the 2015 Erasmus year is especially large for small UAS (51.9 percentage points), while it is 15.4 percentage points for the large UAS (Table 2).

**Table 2: Distribution of the proportion of Bildungsauslaender in 2017, outgoing Erasmus guest lecturers in 2016 and outgoing Erasmus students in 2015 according to UAS size**

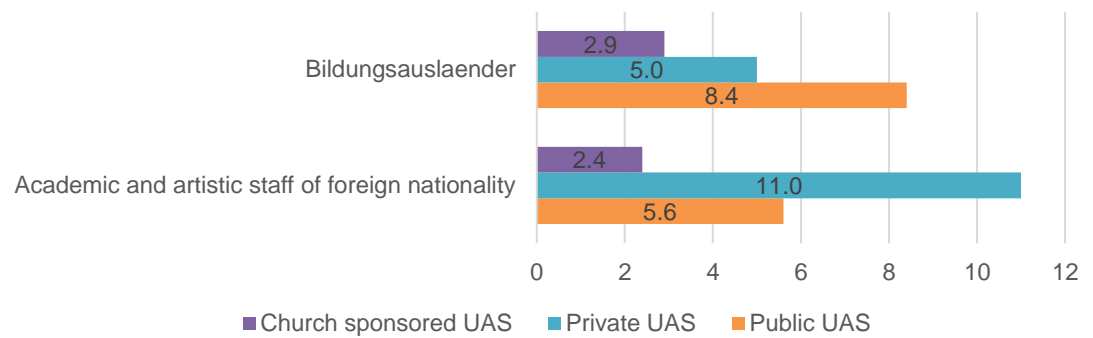
	Cluster	Average	Minimum	Maximum	Spread
Bildungsauslaender	Small UAS	6.8	0.0	79.5	<b>79.5</b>
	Large UAS	7.8	1.4	41.9	<b>40.5</b>
Outgoing Erasmus guest lecturers	Small UAS	7.4	0.0	72.0	<b>72.0</b>
	Large UAS	5.2	0.0	26.3	<b>26.3</b>
Outgoing students Erasmus	Small UAS	5.2	0.0	51.9	<b>51.9</b>
	Large UAS	4.5	0.0	15.4	<b>15.4</b>

■ Small UAS      ■ Large UAS

Source: DAAD and Federal Statistical Office of Germany; special evaluation by the DAAD

There are also differences in the degree of UAS internationalisation depending on the different types of funding body. The proportion of Bildungsauslaender among all students is significantly higher at public UAS (8.4%) than at private (5.0%) and church sponsored (2.9%) UAS (Figure 7). The proportion of academic and artistic staff of foreign nationality according to the funding body shows in turn that the proportion of international staff is lowest at church sponsored UAS (2.4%). However, the proportion of international staff at private UAS (11.0%) is almost twice as high as that at public UAS (5.6%) (Figure 7).

**Figure 7: Proportion of Bildungsauslaender and proportion of academic and artistic staff of foreign nationality according to UAS sponsorship in 2017 (in percent)**



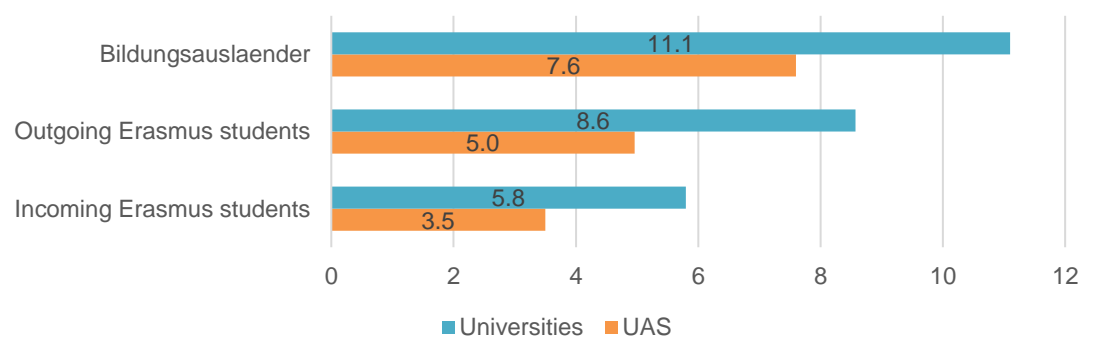
Source: Federal Statistical Office of Germany; special evaluation by the DAAD

### 3.3 Finding 3: Low degree of internationalisation compared to universities

Despite the positive development at UAS, both in general terms and with respect to internationalisation, in most areas the German universities have a higher degree of internationalisation than UAS.

For example, there are considerable differences in the proportion of Bildungsauslaender. In 2017, 11.1% of all university students were Bildungsauslaender, whereas only 7.6% of UAS students were (Figure 8). There are also considerable differences between UAS and universities when it comes to the Erasmus mobility activities of individuals. The proportion of outgoing and incoming Erasmus students in the 2016 Erasmus year differs significantly between the types of higher education institutions. Thus, in 2016, the proportion of outgoing and incoming university Erasmus students is 8.6% and 5.8% respectively, while it is 5.0% and 3.5% at UAS (Figure 8).

**Figure 8: Proportion of Bildungsauslaender in 2017 and proportion of incoming and outgoing Erasmus students in 2016 at universities and UAS (in percent)**

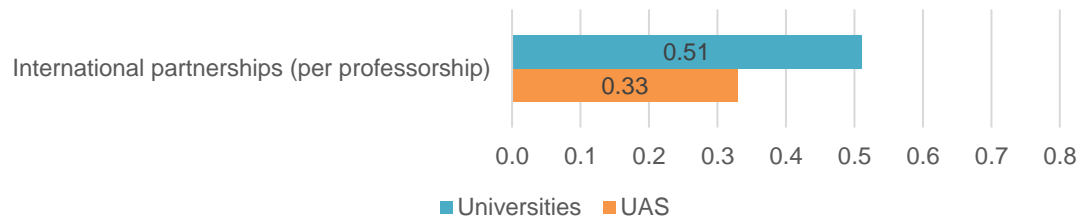


Source: DAAD, European Commission and Federal Statistical Office of Germany; special evaluation by the DAAD

Furthermore, in 2018, German higher education institutions had a total of 17,645 international partnerships outside the EU's Erasmus programme. In relation to the number of professors, this means that, on average, roughly every third professor had a cooperation agreement outside

Erasmus (0.38). Even if, as mentioned above (see Chapter 3.1), UAS have seen a sharp increase in international partnerships per professorship in the last few years, their average of 0.33 is still below the average of all higher education institutions, while the average for universities is appreciably higher (0.51) (Figure 9).

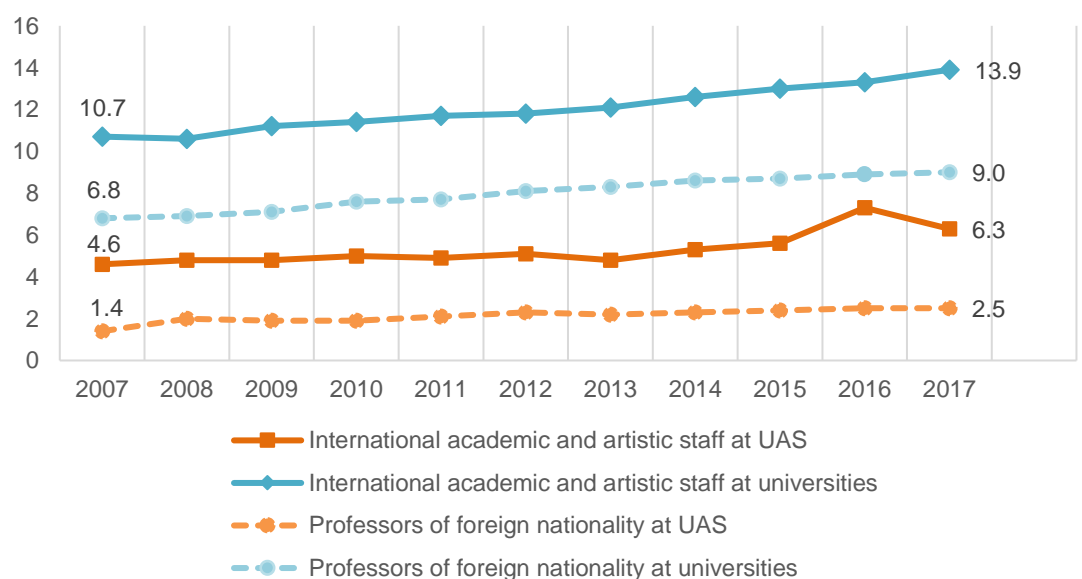
**Figure 9: Proportion of international partnerships (outside Erasmus) per professorship at universities and UAS in 2018 (average)**



Source: DAAD and HRK information portal “International University Partnerships”; special evaluations by the DAAD

A comparison of staff of foreign nationality in 2017 shows that, for both academic and artistic staff overall and for professors, UAS have a much lower proportion of foreigners (6.3% and 2.5% respectively) than universities (13.9% and 9.0% respectively). The proportion of academic and artistic staff at UAS is lower the proportion of corresponding staff at universities by more than half. An analysis of the development of academic and artistic staff of foreign nationality shows that this was consistently higher at universities, with the gap increasing between 2007 and 2017 from around six to around eight percentage points. Similar trends can be seen for professors of foreign nationality; in this case, the gap between universities and UAS increased in the same period from around five to around seven percentage points (Figure 10).

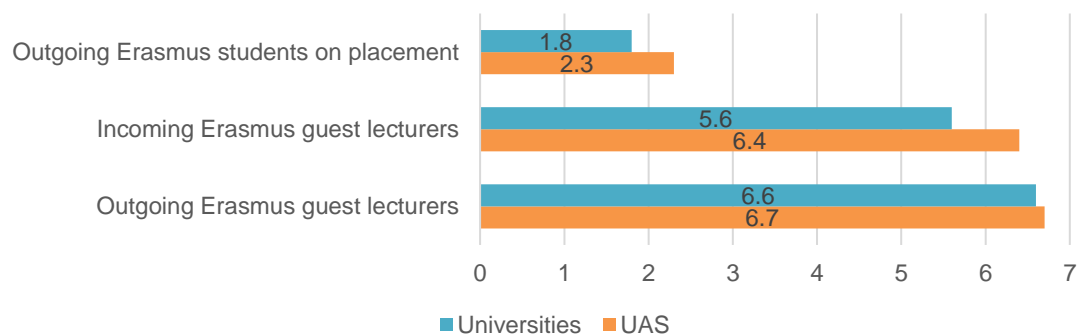
**Figure 10: Development of the proportion of academic and artistic staff as well as professors of foreign nationality at universities and UAS in 2007–2017 (in percent)**



Source: Federal Statistical Office of Germany; special evaluation by the DAAD

However, UAS do not have a lower degree of internationalisation than universities in all areas. In some areas, their internationalisation is further advanced than at universities due to their specific orientation. For example, owing to the practical orientation of their degree programmes, UAS have a higher proportion of outgoing Erasmus students on placement (measured against the total number of graduates at bachelor and master levels in the 2016/17 winter semester) than universities. In 2016, UAS have a higher proportion (2.3%) than universities (1.8%) (Figure 11). Furthermore, the proportion of incoming Erasmus guest lecturers in the 2016 Erasmus year is 5.6% at universities; however, it is 6.4% at UAS (Figure 11). As regards outgoing Erasmus guest lecturers, UAS have a slightly higher proportion (6.7%) than universities (6.6%) (Figure 11).

**Figure 11: Proportion of outgoing Erasmus students on placement and proportion of incoming and outgoing Erasmus guest lecturers from Germany in the 2016 Erasmus year at universities and UAS (in percent)**



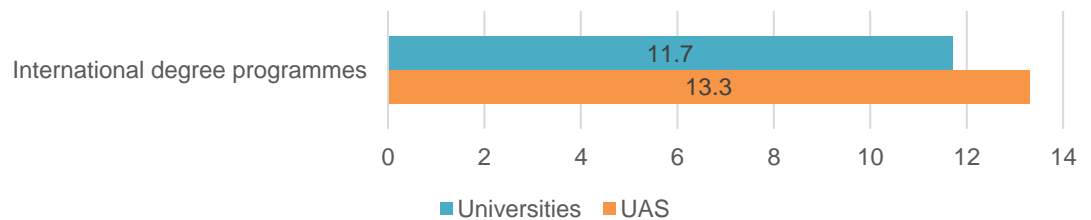
Source: DAAD, European Commission and Federal Statistical Office of Germany; special evaluation by the DAAD

The proportion of international degree programmes at UAS is also higher than at universities. The proportion of international degree programmes (measured against the total number of degree programmes) at UAS is 13.3% in 2018 and thus above that at universities (11.7%) (Figure 12). Many UAS hope that by introducing internationally oriented degree programmes, they will have a suitable tool for intensifying collaboration with international partner higher education institutions, for adding an international component to their own students' education and for strengthening their UAS profile for international students. By introducing international degree programmes, UAS are, at the same time, responding to the challenges of the labour market. Due to increasing globalisation and the growing need for graduates with international skills, Germany's higher education institutions are under growing pressure to assert themselves when recruiting and training students in the global education market.<sup>17</sup>

<sup>17</sup> However, there are no figures available for the number of students enrolled on international degree programmes. Thus, it is not known whether more students are enrolled in international degree programmes at UAS than at universities.



**Figure 12: Proportion of international degree programmes at universities and UAS in 2018 (in percent)**

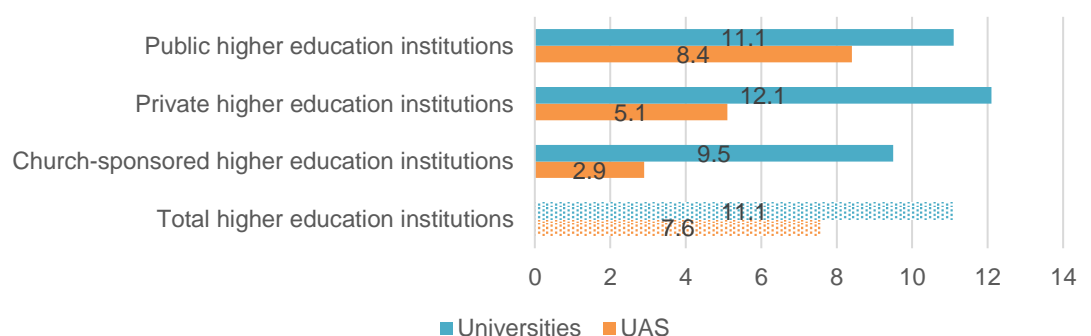


Source: HRK Higher Education Compass; special evaluation by the DAAD

Within their type of higher education institution, however, UAS and universities vary in terms of funding body and size, which in turn has an impact on the degree of internationalisation. Therefore, it makes sense to analyse differences in the degree of internationalisation by taking differences in university and UAS size and funding body into consideration.

Thus, for example, the total proportion of students at private and church sponsored universities (4.4% and 0.3% respectively) is much lower than the proportion of students at public universities (95.3%). On the other hand, the proportion of students at private and church sponsored UAS is 20.6% and 2.4% respectively (see Chapter 2). Thus, the private and church sponsored UAS have a much stronger impact on the overall UAS average than is the case for universities with these funding bodies. The proportion of Bildungsauslaender at the public universities is 11.1%, which consequently corresponds to the overall value for all universities. However, at 8.4%, the proportion of Bildungsauslaender at public UAS is higher than for UAS overall (7.6%) as the proportion of Bildungsauslaender at church sponsored and private UAS is lower at 2.9% and 5.1% respectively, which thus lowers the overall figure for Bildungsauslaender at UAS (Figure 13).

**Figure 13: Proportion of Bildungsauslaender at universities and UAS according to funding body in 2017 (in percent)**

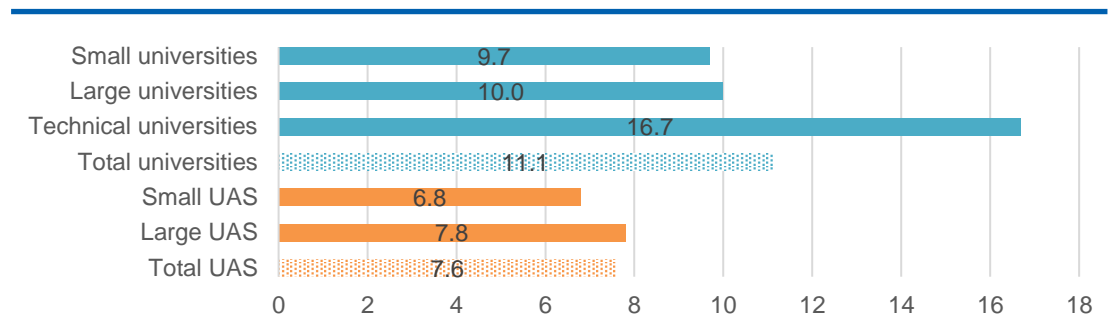


Source: Federal Statistical Office of Germany; special evaluation by the DAAD

When the higher education institutions are differentiated in terms of size according to the clustering in the profile data project, differences in the proportion of Bildungsauslaender in 2017 can also be seen within UAS and universities. For example, the highest proportion of Bildungsauslaender is found at the technical universities (16.7%), followed by the large universities with more than 20,000 students (10.0%) and the small universities with less than 20,000 students (9.7%). In contrast, the proportion of Bildungsauslaender at the large UAS (7.8%) and the small UAS (6.8%) is much lower. It should also be noted that the difference in the proportion of Bildungsauslaender is smaller between the large UAS (7.8%) and the small universities (9.7%) than between all UAS (7.6%) and all universities (11.1%) (Figure 14). The large UAS and the small universities have many similarities in terms of size and structure. The

size of a higher education institution has an impact on national and international visibility, academic performance potential and international commitment. Given the closer degree of internationalisation at large UAS and small universities, it can be assumed that the varying degrees of internationalisation at universities and UAS are characterised by the strongly internationalised large universities.

**Figure 14: Proportion of Bildungsauslaender according to university and UAS size in 2017 (in percent)**



Source: DAAD and Federal Statistical Office of Germany; special evaluation by the DAAD

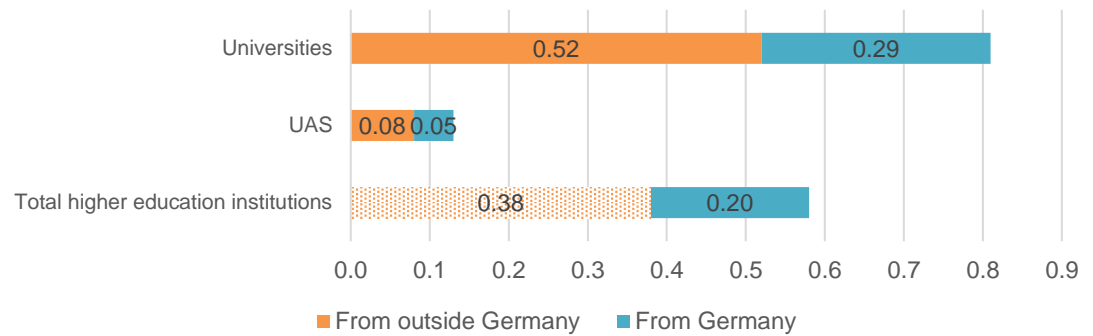
### 3.4 Finding 4: Under-representation in the procurement of funding

The DAAD funding figures for 2017 and 2018<sup>18</sup> and the development of EU third-party funding demonstrate that UAS are frequently under-represented in the internationalisation funding programmes.

Measured against the total number of all students in the 2016/17 winter semester, the proportion of individual DAAD funding recipients in 2017 was 0.38% from outside Germany and 0.20% from Germany, with substantial differences between the individual DAAD funding recipients depending on the type of higher education institution. At universities, the proportion of individual DAAD funding recipients was 0.52% from outside Germany and 0.29% from Germany, which indicates a higher degree of internationalisation in this area than at UAS. With an average of 0.08% individual DAAD funding recipients from outside Germany and 0.05% from Germany, UAS play a comparably minor role in the DAAD programmes funding individual recipients (Figure 15). In addition, in 2017, 72% of the small UAS and 62% of the large UAS did not participate in the DAAD programmes funding individual recipients at all or only to a very limited extent (maximum proportion 0.10%). One of the reasons for the low UAS participation is the comparably high proportion of bachelor students at UAS (who only make up a small proportion of DAAD funding recipients) and the fact that some programmes providing funding for individuals are aimed exclusively at PhD students and young academics, and thus especially at universities.

<sup>18</sup> The DAAD publishes annual university-related funding figures, in which DAAD funding attributable to a higher education institution is broken down into various categories and made available to the higher education institutions. See also: <https://www.daad.de/der-daad/zahlen-und-fakten/de/29285-daad-foerderranking/>.

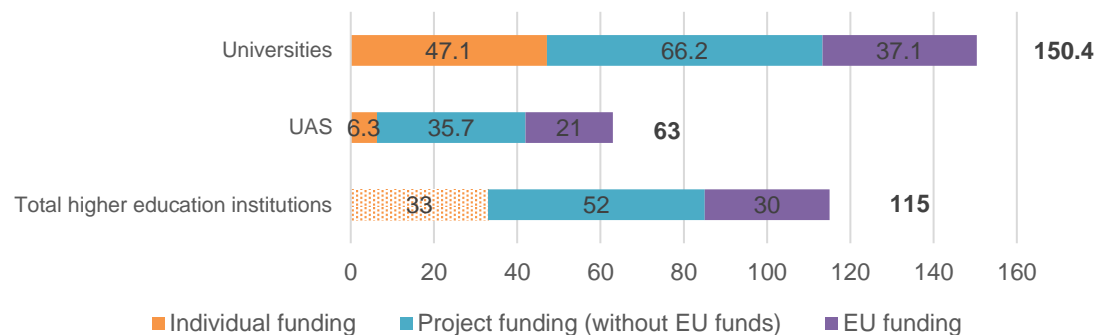
**Figure 15: Proportion of individual DAAD funding recipients at universities and UAS in 2017 (in percent)**



Source: DAAD and Federal Statistical Office of Germany; special evaluation by the DAAD

In 2017, the DAAD spent an average of 115 euros per student (measured against the total number of all students in the 2016/17 winter semester). Of this, 33 euros was made available for individual funding, 52 euros for project funding from federal government funds and other national sources and 30 euros for EU funding. Universities received a total average amount of 150 euros per student. UAS, on the other hand, received total funding of only 63 euros per student, thus attracting much less funding (Figure 16).

**Figure 16: DAAD funding at universities and UAS in 2017 (average in euros)**



Source: DAAD and Federal Statistical Office of Germany; special evaluation by the DAAD

Analysis of the provision of DAAD funds from national funds for individual and project funding also indicates that many small UAS do not participate in the DAAD programmes (36%). While 92% of the large universities and technical universities as well as 71% of the small universities attracted more than 50 euros per student as part of individual and project funding in 2017, only 24% of the large UAS and 18% of the small UAS achieved this amount (Table 3). This shows that UAS are generally less successful than universities in the competitive procedures to procure DAAD grants but, at the same time, there are differences in funding procurement within this type of higher education institution.

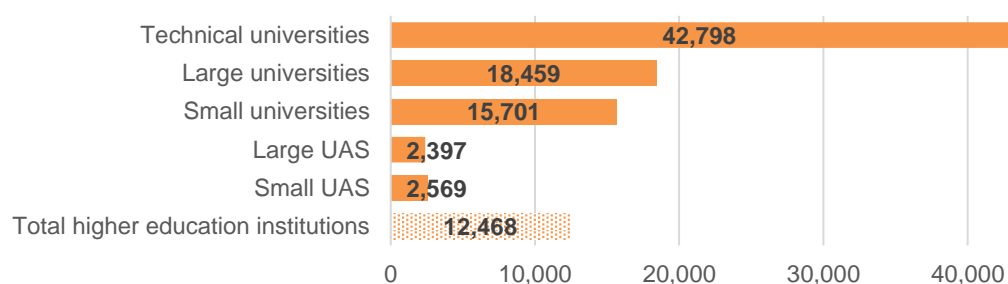
**Table 3: DAAD funding of individual and project funding according to university and UAS size in 2017 (in percent)**

	TU	Large university	Small university	Large UAS	Small UAS
No DAAD funding	0	0	8	4	36
Up to 25 euros	0	0	13	42	30
26–50 euros	0	9	8	31	15
51–100 euros	27	38	30	17	9
101 euros and above	73	53	41	7	9

Source: DAAD and Federal Statistical Office of Germany; special evaluation by the DAAD

A similar picture emerges regarding the procurement of EU third-party funding. In relation to the number of professors, German higher education institutions received an average of 12,488 euros per professorship from the funds available in the 2016 budget year. However, this amount varies to a considerable extent between the types of higher education institution. Professors at small universities had 15,701 euros on average from EU third-party funding; professors at technical universities had as much as 42,798 euros on average per professorship. In contrast, UAS professors attract less than 4,000 euros, whereby 75% of the small UAS did not receive any EU third-party funding in the 2016 budget year (Figure 17).<sup>19</sup>

**Figure 17: EU third-party funding per professorship at universities and UAS in 2016 (average in euros)**



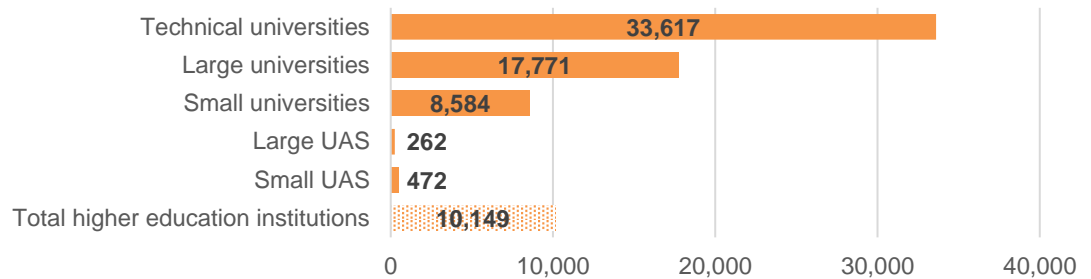
Source: Federal Statistical Office of Germany; special evaluation by the DAAD

The low success rate of UAS in DAAD funding procedures and in EU third-party funding is put into perspective against the target groups for many funding programmes. Various calls for funding applications are not primarily aimed at UAS and their students. On the one hand, this is due to the fact that a number of DAAD programmes explicitly support PhD students and young academics, thus excluding many UAS students. For example, in 2018, approx. 29.5% of all scholarship holders were PhD students in DAAD individual funding programmes (DAAD 2019a: 114 ff.). EU funds are primarily available for research purposes, and thus tend to be for universities. The development of Horizon 2020 funds per professorship based on the contracts

<sup>19</sup> EU third-party funding for higher education institutions essentially comprises grants from the European framework programme for research Horizon 2020, the European Social Fund (ESF) and the European Regional Development Fund (ERDF). It should be noted that EU funding, which is awarded to the higher education institutions via third parties like, for example, the DAAD as the national agency for the Erasmus programme, is not reported as EU third-party funding in the higher education finance statistics.

concluded with German higher education institutions clearly shows the low success rate of UAS in these procedures: The average grant is less than 500 euros for UAS compared to more than 8,500 euros for universities and as much as 33,617 euros for technical universities (Figure 18).

**Figure 18: Horizon 2020 funds pro professorship based on contracts concluded with German higher education institutions in 2017 (average in euros)**



Source: EU Office of the Federal Ministry of Education and Research (in the DLR Project Management Agency); special evaluation by the DAAD

It is uncertain to what extent the under-representation of UAS in funding awards is linked to the type of calls for funding applications. Even in the case of funding aimed at all students, the number of UAS scholarship holders in some (particularly financially extensive) programmes is below average. For example, the proportion of 167 UAS funded by the DAAD in 2018 in the programme “One-Year Scholarships for German Undergraduates” was only 13% (178,478.63 euros), thus being much lower than the proportion of UAS students in Germany (35%).<sup>20</sup> Even in the programme “Development-Related Postgraduate Courses (EPOS)”, in which UAS attracted the highest amount of funding in absolute figures, UAS ultimately received only 14% of the total funds available to German higher education institutions in this DAAD programme.<sup>21</sup>

The heterogeneous international orientation of UAS and the high degree of internationalisation of a small leading group of UAS reflects the differing UAS participation in the DAAD programmes. It can thus be seen, for example, that in 2018 the five UAS that received the most funding account for nearly a fifth of total funding for all 167 UAS funded by the DAAD. This covers individual funding, project funding and Erasmus funding. The five strongest UAS across all DAAD programmes thus have a funding share that is clearly disproportionate to their share of all UAS students (5.8%). As regards universities, it is also the case that the distribution of DAAD funding is not proportional to the size of the higher education institution. This is perfectly acceptable in line with competitive funding. However, the imbalances are much greater in the case of UAS.<sup>21</sup>

#### 4. (Strategic) orientation of internationalisation at UAS

Internationalisation has gained in importance at the higher education institutions in Germany and has become an integral part of most higher education institution profiles. That is why higher education institutions around the world and in Germany are progressively developing strategies to promote and successfully institutionalise internationalisation. Consequently, it is necessary to target resources in the area of internationalisation. But what exactly is the importance of

<sup>20</sup> Source: DAAD.

<sup>21</sup> Source: DAAD.

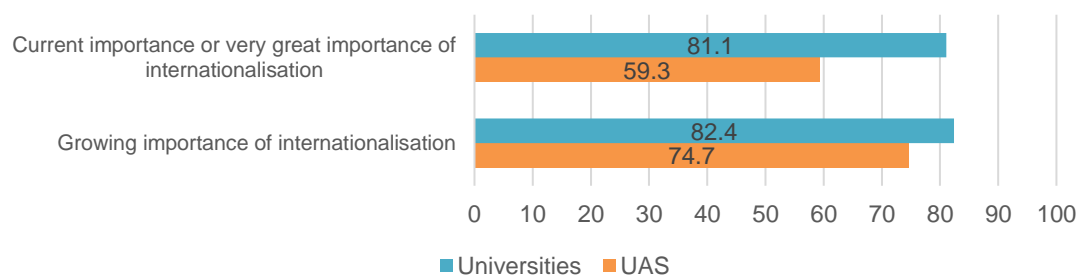
internationalisation? To what extent are internationalisation strategies prevalent at UAS? And what are their objectives, priorities and regional orientation?

The following overview is based on the evaluation of a survey conducted among DAAD member higher education institutions from mid-October 2017 to mid-November 2018 and from the beginning of December 2018 to mid-February 2019, in which 190 higher education institutions responded to questions about their international orientation, motivation and obstacles as well as the regional orientation of their internationalisation endeavours. The survey was sent to the heads of International Offices. A total of 91 UAS, 74 universities, 23 colleges of art and music and two theological higher education institutions participated. The responses of the 91 UAS and the 74 universities are taken into account in this overview.

#### 4.1 Importance of internationalisation

The growing importance of the internationalisation of higher education institutions can be seen, for example, in the strategy papers of important stakeholders. For example, in 2013, the Joint Science Conference (GWK) identified spheres of action for further promoting the internationalisation of higher education institutions (GWK 2013: 2 ff.). The DAAD addresses the specific relevance of UAS internationalisation as well as dual degree programmes (DAAD 2013: 11 ff.). The Science Council also calls explicitly for a stronger focus on UAS internationalisation in their “Recommendations for the internationalisation of higher education institutions” dated July 2018 (Science Council 2018: 48 ff.). It is thus hardly surprising that internationalisation is becoming increasingly important among the DAAD member higher education institutions. In the five years preceding the survey, its importance has increased at 74.7% of UAS. There has been an increase in importance at as many as 82.4% of universities. In spite of this increase, only 59.3% of UAS stated in the DAAD survey that internationalisation plays an important or very important role at their institution whereas it was 81.1% in the case of universities (Figure 19).

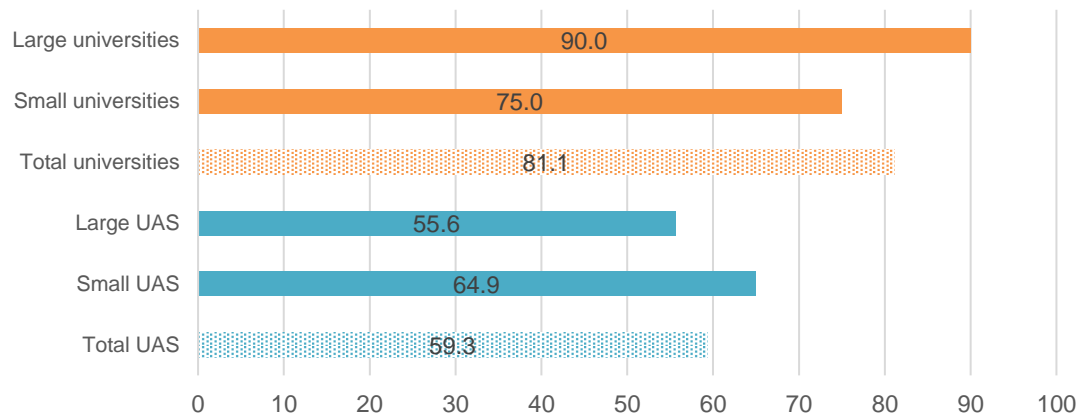
Figure 19: Importance of internationalisation at universities and UAS in 2018/2019 (in percent)



Source: DAAD

While an analysis of the growing importance of internationalisation identifies only minor differences between the individual higher education clusters, the responses indicate differences in its current importance: 55.6% of all the large UAS see internationalisation as important or very important, compared to 64.9% of the small UAS. It is the opposite in the case of universities. There, 90% of the large universities and 75% of the small universities consider internationalisation to be important or very important (Figure 20).

Figure 20: Current importance or very great importance of internationalisation at universities and UAS according to type and size in 2018/2019 (in percent)



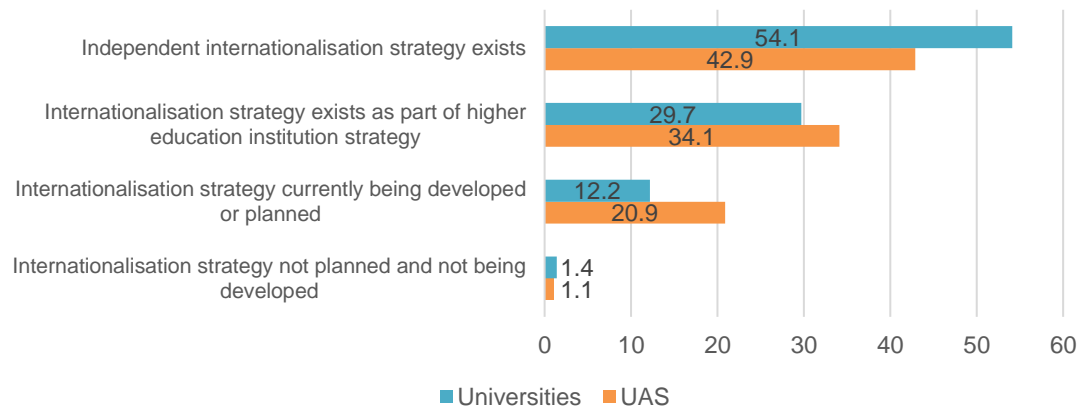
Source: DAAD

## 4.2 Internationalisation strategies

In 2018, the Science Council once again emphasised the relevance of internationalisation strategies, arguing that individual internationalisation endeavours can only be successful “if they are systematised according to agreed guidelines with long-term perspectives, given priority, provided with resources and made permanent with structures” (Science Council 2018: 78 ff.). A large majority of UAS are already following this guiding principle and have developed strategies for their internationalisation as well as establishing a clear international profile. Thus, the DAAD survey shows that 76.9% of the participating UAS already have an internationalisation strategy and a further 20.9% are developing or planning one. Only 1.1% of UAS, and only 1.4% of universities, stated that they are not developing an internationalisation strategy and are not planning to do so. Here too, universities have a higher degree of internationalisation than UAS as there are 83.8% more universities with an internationalisation strategy than there are UAS (Figure 21). Nevertheless, with 20.9% of UAS currently drawing up an internationalisation strategy, this reflects the fact that UAS have experienced a dynamic development and are now closing the gap to universities, which began to institutionalise their international profile and activities earlier. The number of UAS with internationalisation strategies is likely to increase further in the medium term and steadily approach the figure for universities. It is interesting to note, however, that UAS attach less strategic value to internationalisation strategies than universities. Only 38.4% of UAS compared to 53.5% of universities rate internationalisation strategies as very useful.



**Figure 21: Spread of internationalisation strategies at universities and UAS in 2018/2019 (in percent)**

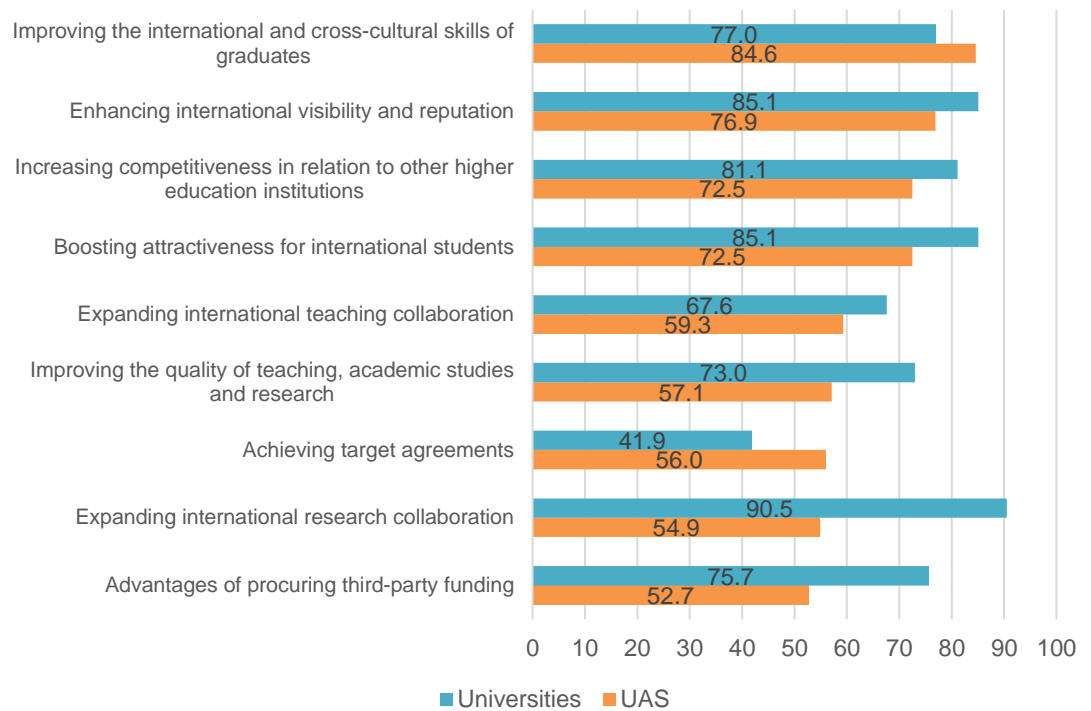


Source: DAAD

### 4.3 Motivation for internationalisation and areas of internationalisation

The four key motives and reasons for internationalisation considered important or very important by UAS in the DAAD survey are to improve the international and cross-cultural skills of graduates (84.6%), to enhance international visibility and reputation (76.9%), to increase competitiveness in relation to other higher education institutions (72.5%) and to boost attractiveness for international students (72.5%) (Figure 22). Thus, the main emphasis for UAS is generally on winning and qualifying students, and training students is seen as the key incentive for internationalisation. In the case of universities, the four main reasons for internationalisation also include enhancing international visibility and reputation (85.1%), boosting attractiveness for international students (85.1%) and increasing competitiveness in relation to other higher education institutions (81.1%). Unlike UAS, however, universities stated that the most important motive for internationalisation was to extend international research collaboration (90.5%), which represents an essential difference to UAS motivation for internationalisation. While this motive is considered important among universities, UAS generally view international research collaboration as a less important reason for internationalisation (54.9%), largely due to their limited research focus and their stronger focus on teaching, practical experience and their labour market orientation (Figure 22). Nevertheless, extending international research collaboration plays a very important role for just under a fifth of UAS, which reflects “academic drift” as UAS move towards becoming research-focused higher education institutions (Science Council 2010a: 27 ff.). A further reason for internationalisation given UAS is the focus on an international labour market and the need for international collaboration with industry. Universities and UAS also mentioned the importance of promoting their location by worldwide networking with the region.

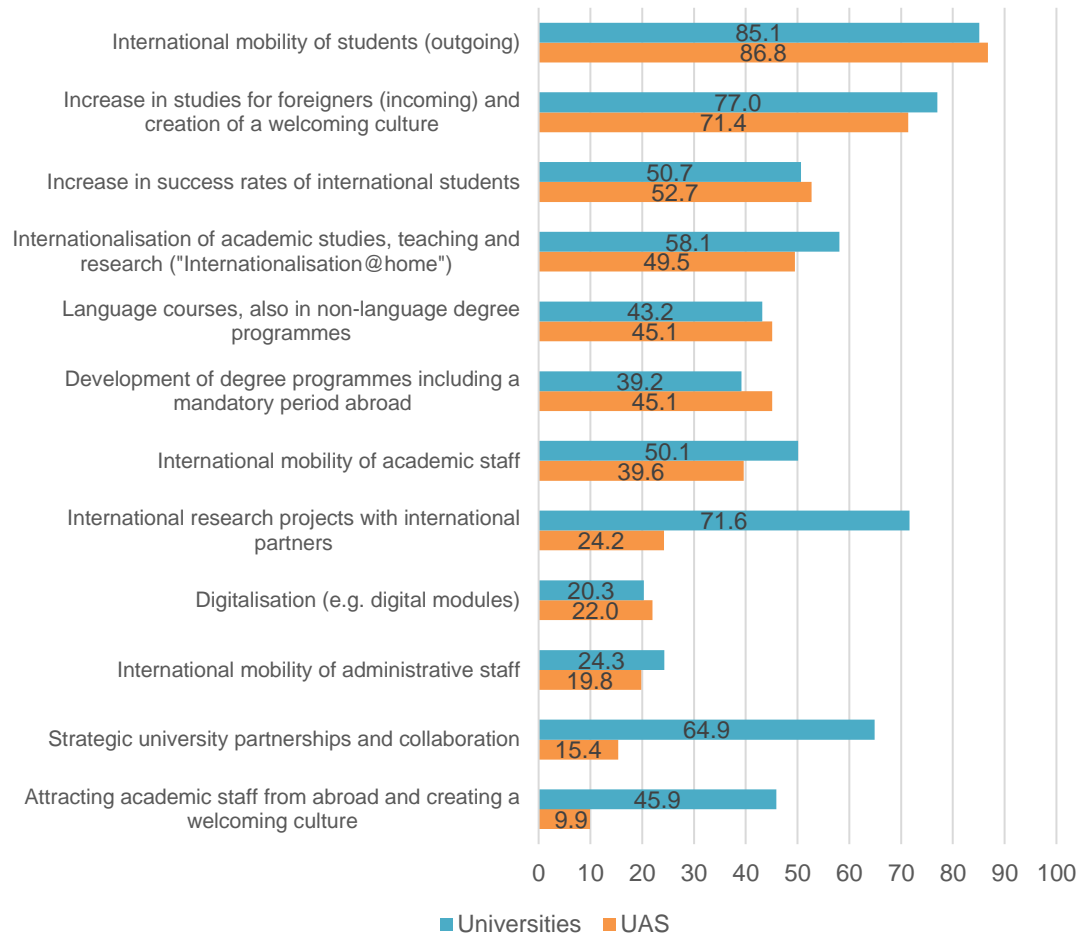
Figure 22: Motivation for internationalisation at universities and UAS in 2018/2019 (in percent)



Source: DAAD

The key area in which UAS wish to advance internationalisation is the international mobility of students (outgoing). Thus, 86.8% of UAS state that internationalisation in this area is important or very important for them. This is followed by increasing the number of studies for foreigners (incoming) and creating a welcoming culture (71.4%), improving the success rates of international students (52.7%) and internationalising academic studies, teaching and research (Internationalisation@home) (49.5%). Once again it is clear that students and areas affecting students are the focus of internationalisation at UAS (Figure 23). The international mobility of students (outgoing) followed by increasing the studies for foreigners (incoming) and creating a welcoming culture are also rated between important and very important by universities (85.1% and 77.0% respectively). After that, however, they focus on areas relevant for research. For them, international research projects with partners abroad (71.6%) and strategic university partnerships and collaboration (64.9%) are more relevant than for UAS, which rated these areas in eighth position (24.2%) and eleventh position (15.4%) (Figure 23).

Figure 23: Internationalisation areas at universities and UAS in 2018/2019 (in percent)



Source: DAAD

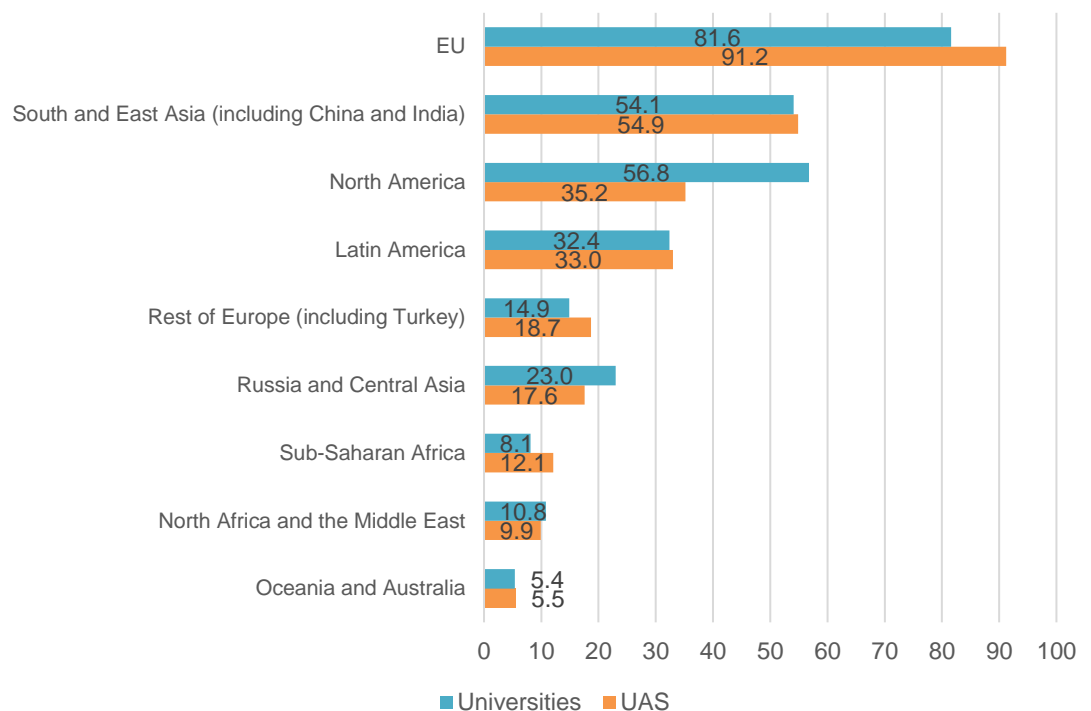
#### 4.4 Regional orientation of internationalisation

The regional orientation of both UAS and universities is focused on the countries of the European Union, South and East Asia, North America and Latin America.<sup>22</sup> There are differences in the importance of the respective regions for the different higher education institutions. While more than 90% of UAS consider the EU to be the most important region by far in the internationalisation process, universities mention the EU much less frequently as a top priority (81.6%) and thus focus less on the countries close to Germany. In fact, their most important regional orientation is less focused and spread over various regions. A further difference in regional orientation between the two types of higher education institution can be seen in the fact that North America (in other words, the USA and Canada) plays a prominent role for the German universities as the target of internationalisation activities (56.8%), followed by Europa and South and East Asia together (54.1%). In contrast, this region is far less important for UAS (35%) and comes after South and East Asia (54.9%) (Figure 24).

<sup>22</sup> The higher education institutions participating in the survey could name up to three key regional areas for their internationalisation activities.

Possible causes for the regional orientation of UAS can only be assumed. It may be more difficult for UAS, which are less well-known and strongly practice-focused rather than research-focused, to establish partnerships with renowned higher education institutions in North America. At the same time, the up-and-coming higher education sector in Asia, where there are many newly founded higher education institutions with a practical orientation, is obviously an interesting new region for collaboration.

**Figure 24: Regional orientation of internationalisation activities at universities and UAS in 2018/2019 (in percent)**



Source: DAAD

The partner countries named as being of the greatest importance for UAS included China and three European countries: Great Britain, France and Russia. These countries are among the most important host countries and countries of origin worldwide for international students (DAAD & DZHW 2019: 22 ff.).

#### 4.5 Obstacles to creating international UAS

When planning and implementing their international activities, higher education institutions are faced with a variety of structural obstacles that make successful internationalisation difficult. The main obstacles mentioned as being important or very important by UAS were insufficient staff resources (86.8%), insufficient incentives for lecturers and researchers (68.1%) and language barriers (63.7%). But an important role is also played by a lack of interest in internationalisation on the part of lecturers and researchers (57.1%) and a lack of financial resources (50.5%) (Figure 25).<sup>23</sup> The key obstacles can be attributed, among other things, to

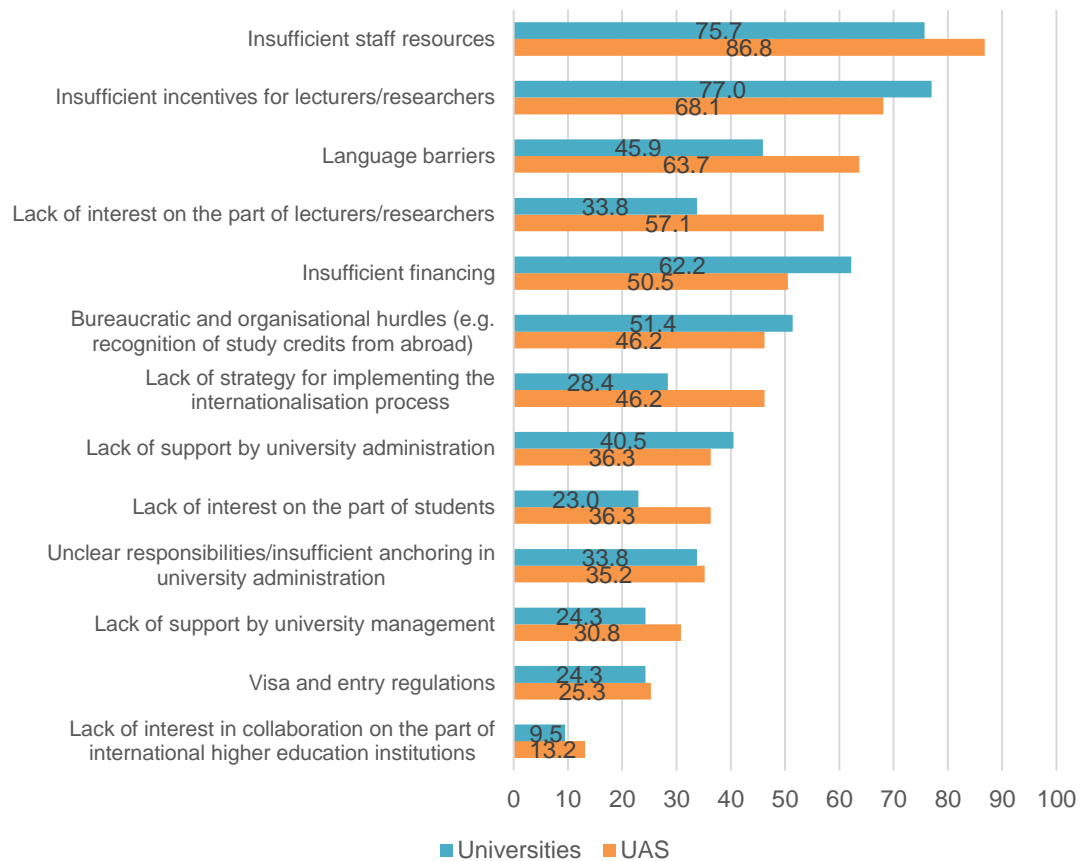
<sup>23</sup> This is demonstrated by the results of the DAAD survey of all member higher education institutions on the state of higher education internationalisation.

the special UAS staffing structure. UAS, and in particular small UAS, have much fewer non-professorial teaching staff. Due to the fact that UAS frequently do not have the right to confer doctorates and graduates are more strongly focused on the labour market, there are far fewer UAS research associates to deal with international project and partner structures and corresponding applications for third-party funding. What is more, UAS professors have a much higher teaching load generally amounting to 18 semester week hours compared to eight to 10 in the case of university professors; this makes commitment to international exchange and research partnerships or comparable activities more difficult in terms of time. A similar picture emerges at the administrative level, with international offices as key stakeholders in internationalisation having fewer staff than at universities; however, the international offices at both types of higher education institution criticised equally the high amount of work, bureaucratic processes and a lack of appreciation. All in all, UAS have fewer staff to deal with internationalisation. Limited staff resources have an impact on the basic development of internationalisation activities and structures. Interestingly, universities also mentioned the most important obstacles as being insufficient staff resources (75.7%), insufficient incentives for lecturers and researchers (77.0%) and insufficient funding (62.2%). However, there is relatively rarely a lack of interest in internationalisation activities on the part of lecturers and researchers at universities (33.8%) (Figure 25). When it comes to obstacles to internationalisation, some of the structural features already mentioned, which simultaneously have a positive impact on practice-oriented teaching at UAS, cannot be ignored. Thus, the career paths of UAS lecturers are more strongly oriented to experience with commercial enterprises and non-profit organisations and not teaching visits to higher education institutions abroad. This is why UAS lecturers have less international experience in research collaboration and therefore fewer networking tools and resources for enquiries from abroad. What is more, it should once again be noted that many funding programmes are designed for research and doctoral studies.

The willingness to be mobile is generally lower at UAS than at universities. UAS that participated in the DAAD survey estimate a lack of interest in mobility on the part of students as a significant obstacle to internationalisation (36.3%), whereas universities consider this to be less of an impediment (23.0%) (Figure 25). There may be a variety of causes for this: for example, there are more often first-generation students at UAS. Thus, 58% of UAS students have parents who do not have an academic degree, compared to only 44% at universities (BMBF 2016: 28 ff.). In the case of first-generation students, international mobility generally plays a minor role in academic studies as the decision to spend time abroad depends, among other things, on social factors such as the financial means available. Studies show that students whose parents have been to university go abroad more frequently during their academic studies and receive an international scholarship more frequently than first-generation students (Finger & Netz 2016: 1 ff.). Moreover, UAS are more frequently located in rural regions and are generally characterised by a strong link to regional institutions and commercial enterprises. This regional orientation is reflected in the mix of the student body. As already discussed, the proportion of international students, especially at the small UAS, is often lower than at universities (see Chapter 3.3) and the students often come from the surrounding region. Limited international contact on campus and in the region may result in lower cross-cultural awareness. At the same time, international collaboration is not contrary to a strong regional focus. In fact, internationalisation enhances the local dimensions and reveals potential for regional development as well as for the local and global labour market (CHE 2019: 22 ff.).

Apart from the obstacles to internationalisation addressed above, other major obstacles mentioned by UAS include the lack of a strategy for implementing the internationalisation process (46.2%) as well as bureaucratic and organisational hurdles, such as the recognition of study credits from abroad (46.2%). Universities, on the other hand, consider the language barriers (45.9%) and the lack of an internationalisation strategy (28.4%) to be relatively minor obstacles; however, they consider bureaucratic and organisational hurdles to be greater obstacles (51.4%) than UAS (Figure 25).

Figure 25: Obstacles to internationalisation at universities and UAS in 2018/2019 (in percent)



Source: DAAD

## 5. Conclusion and outlook: continue the positive development

In the last few years, UAS have made huge advances overall in the area of internationalisation. Considering the obstacles to internationalisation and the higher degree of internationalisation at universities, however, there is potential for the further development of internationalisation at UAS. But a direct comparison of UAS with universities does not do justice to the special features and the diversity of UAS. Depending on size, sponsorship or subject area, significant differences in the degree of internationalisation can be observed within UAS, as the essential diversity of UAS is reflected in their internationalisation activities. On the one hand, there is a small group of UAS with a high degree of internationalisation, which benefit disproportionately from the funding procedures; on the other hand, there are a large number of UAS whose international positioning is minimal or hardly exists.

At the same time, some challenges remain as regards UAS internationalisation in the future. Heterogeneity in the degree of internationalisation can be observed not only at UAS but also on the part of students, staff and academics. Some groups have an above-average level of mobility. Above all, structural obstacles exist when it comes to recognising study credits from abroad. Challenges with regard to international students are the high drop-out rates for

Bildungsauslaender<sup>24</sup> and the integration of refugee students into Germany's higher education system. However, the various challenges can be overcome by modifications and improvements in admission, counselling and integration.

UAS should continue to pursue the goal of further increasing their internationalisation. It is necessary to work towards nationwide support, thus countering the imbalance in funding in order to support more than individual, particularly active UAS. This goal presupposes stronger, more active participation on the part of institutions that previously received little funding. Apart from increasing absolute funding amounts and mobility numbers, it is important to consider a percentage increase in internationalisation, such as in the proportion of Bildungsauslaender. It is therefore necessary to sustain internationalisation structures and to maintain and continue what has already been achieved.

In order to do this, various measures are indispensable. Among other things, funding opportunities must be tailored to meet the needs of UAS, which has already begun with the new DAAD programme "UAS. International". In addition, internationalisation concepts must be individual and distinct from those of universities. To this end, the programme "UAS. International" also offers support in the form of seminars at the International DAAD Academy (iDA). The seminars also serve as a platform for exchange. Furthermore, students, academics and staff must be motivated to participate in activities abroad, collaboration must be agreed and cross-border placements, study visits and teaching assignments must be established. Periods abroad offer an opportunity to acquire cross-cultural competence and language skills, and collaboration creates a worldwide network of partners that can be used to win qualified professionals. At the same time, international students, academics and international staff must be recruited and receive support. It is necessary to facilitate the recognition of study, to create mobility windows, to reduce the loss of time and to change the attitude of students to study abroad. Visits by international students and lecturers at German UAS can enrich the learning potential for students in Germany in line with Internationalisation@home and students can benefit from international exchange. Digital learning formats and an increase in English-language teaching also support Internationalisation@home. Digitalisation and language must be seen as the key to access for international students and lecturers. In order to offer professors more freedom for internationalisation activities, UAS teaching load must be reduced for commitment to international activities. What is more, internationalisation needs to be institutionalised at all levels, including management level. In addition to marketing measures and profile development, UAS should create a welcoming culture on their campus. At the same time, networking among UAS and the creation of exchange platforms are expedient for learning together and from one another with regard to internationalisation.

Generally, the current dynamics at UAS should be used to provide new stimuli for internationalisation at all types of higher education institution. Practical application in teaching and collaboration with industry may serve as an innovative model for internationalisation and offer great potential for the international dimension of higher education institutions. Last but not least, great interest from abroad in UAS type of higher education institution shows that UAS are on track as regards internationalisation.

<sup>24</sup> In the 2014 examination year, the drop-out rate for Bildungsauslaender in bachelor's degree programmes was 41% and in master's degree programmes 28%, which was well over the drop-out rates for German students (bachelor: 29%, UAS master: 19%) (Kercher 2018: 6). Detailed information on drop-out rates can be found in the DAAD Focus "[Academic success and dropout among international students in Germany and other major host countries](#)", which also explores reasons for the drop-out rates among Bildungsauslaender without, however, differentiating between universities and UAS. Reference is also made to the BMBF-funded joint project "Success and withdrawal of international students in Germany" (SeSaBa) conducted by the DAAD in conjunction with Hagen distance university (FernUniversität) and the Bavarian State Institute for Higher Education Research and Planning (IHF) in Munich. The joint project investigates the factors determining rates of success and drop-out rates among international students in Germany (<https://www.daad.de/en/the-daad/what-we-do/education-expertise-services/sesaba/>).



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