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Wissenschaft weltoffen kompakt



2017

Facts and Figures on the International Nature of Study and Research in Germany

DZHW Deutsches Zentrum für
Hochschul- und Wissenschaftsforschung

DAAD Deutscher Akademischer Austauschdienst
German Academic Exchange Service

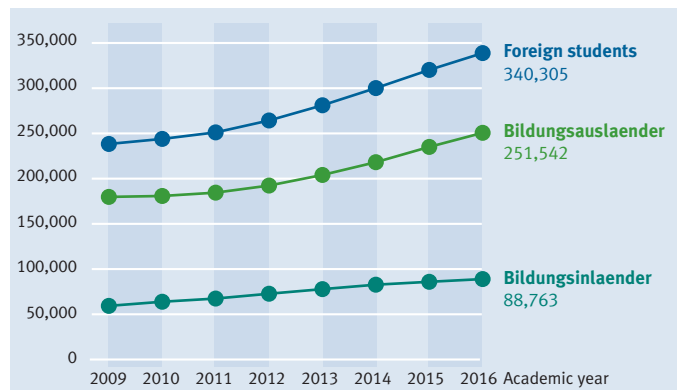
FOREIGN STUDENTS IN GERMANY

Foreign students at German higher education institutions fall into two distinct groups: **Bildungsinlaender** and **Bildungsauslaender**. Bildungsinlaender are students of other nationalities who have obtained their higher education entrance qualification in Germany, while Bildungsauslaender are students of other nationalities who have obtained their higher education entrance qualification outside Germany. Bildungsinlaender have usually lived in Germany for a long period and attended a German school before going to university here, whereas Bildungsauslaender usually come to Germany primarily in order to study here.



The **central data basis** on foreign students in Germany is the Federal Statistical Office's statistics on students and examinations. These data are collected by higher education institutions in accordance with statutory provisions, examined by the statistical offices of the federal states and passed on to the Federal Statistical Office.

1 | Foreign students, Bildungsauslaender and Bildungsinlaender since 2009



2 | German and foreign students by type of higher education institution 2016, number and in % of all students at German higher education institutions



Students	All Higher Education Institutions		Universities		Universities of Applied Sciences (UAS)	
	Number	in %	Number	in %	Number	in %
German students	2,417,494	87.7	1,552,163	86.6	865,331	89.6
Foreign students	340,305	12.3	239,825	13.4	100,480	10.4
Bildungsauslaender	251,542	9.1	188,101	10.5	63,441	6.6
Bildungsinlaender	88,763	3.2	51,724	2.9	37,039	3.8

3 | Bildungsauslaender by type of mobility 2005, 2010, 2015 und 2016, number and in % of all Bildungsauslaender at German higher education institutions

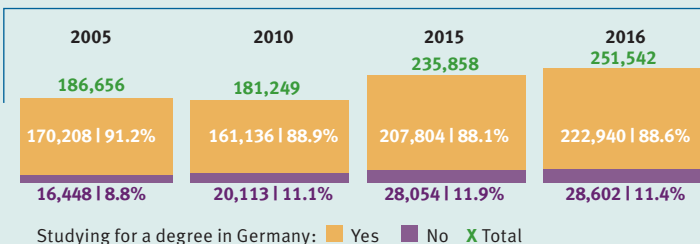


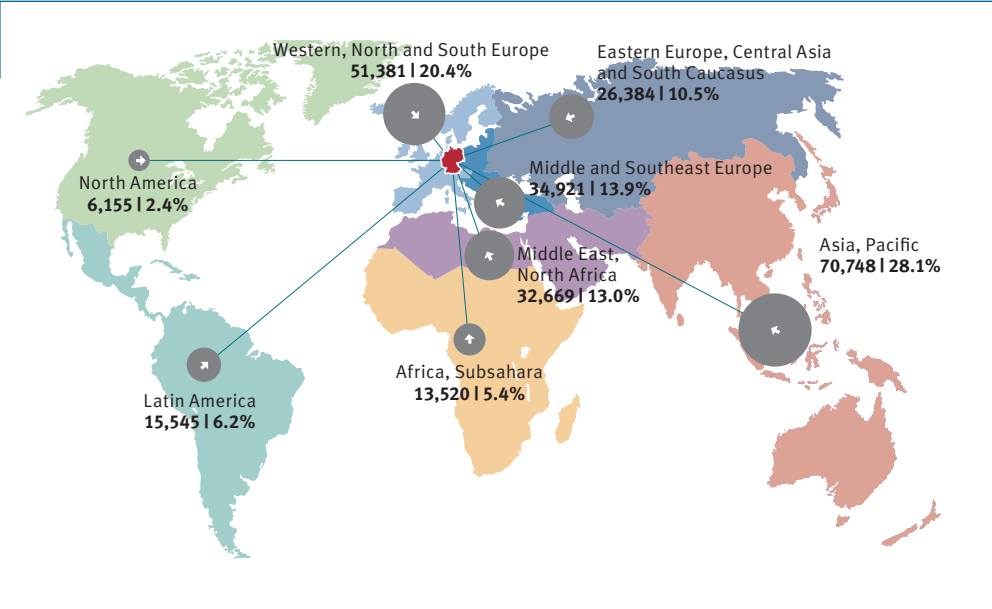
Fig. 1-3

Source: Federal Statistical Office; DZHW calculation

Deviations from 100 % are due to rounding.

The academic year is taken as the basis for determining the number of students. Using this method, students of the winter semester 2015/16 are defined as students of the academic year 2016.

4 | **Bildungsanländer in 2016, by region of origin,**
number and in % of all Bildungsanländer at German higher education institutions



Total number of Bildungsanländer at German higher education institutions 251.542
(including 219 students who could not be classified by region)

5 | **Bildungsanländer from the top 20 countries of origin 2016, number and in % of all Bildungsanländer at German higher education institutions**

Country of origin	Number	in %
China	32,268	12.8
India	13,537	5.4
Russia	11,413	4.5
Austria	10,129	4.0
Italy	8,047	3.2
France	7,330	2.9
Cameroon	7,106	2.8
Ukraine	6,941	2.8
Turkey	6,930	2.8
Bulgaria	6,840	2.7
Iran	6,449	2.6
Poland	5,994	2.4
Spain	5,939	2.4
USA	5,213	2.1
South Korea	5,140	2.0
Morocco	4,805	1.9
Brazil	4,586	1.8
Indonesia	4,176	1.7
Luxembourg	3,909	1.6
Pakistan	3,836	1.5
Total	251,542	100.0

6 | Bildungsauslaender in 2016, by type of degree and type of higher education institution,
 number and in % of all Bildungsauslaender at German higher education institutions

	Total		Universities		UAS	
	Number	in %	Number	in %	Number	in %
Bachelor's degree	90,214	35.9	51,396	27.3	38,818	61.2
Master's degree	86,245	34.3	68,326	36.3	17,919	28.2
PhD	25,467	10.1	25,453	13.5	14	0.0
Other degrees	21,014	8.4	19,341	10.3	1,673	2.6
Not studying for a degree	28,602	11.4	23,585	12.5	5,017	7.9
Total	251,542	100.0	188,101	100.0	63,441	100.0

7 | Bildungsauslaender in 2016, by subject group¹ and type of higher education institution,
 number and in % of all Bildungsauslaender at German higher education institutions

	Total		Universities		UAS	
	Number	in %	Number	in %	Number	in %
Engineering	90,952	36.2	58,571	31.1	32,381	51.0
Law, Economics and Social Sciences	66,390	26.4	42,614	22.7	23,776	37.5
Humanities	32,308	12.8	31,500	16.7	808	1.3
Mathematics, Natural Sciences	25,770	10.2	24,000	12.8	1,770	2.8
Medicine, Health Sciences	13,865	5.5	12,822	6.8	1,043	1.6
Art, Art History	13,657	5.4	11,551	6.1	2,106	3.3
Agricult., Forestry a. Food sciences, Vet. Medicine	5,765	2.3	4,542	2.4	1,223	1.9
Other	2,835	1.1	2,501	1.3	334	0.5
Total	251,542	100.0	188,101	100.0	63,441	100.0

Fig. 4-7

Source: Federal Statistical Office

Deviations from 100 % are due to rounding.

The academic year is taken as the basis for determining the number of students. Using this method, students of the winter semester 2015/16 are defined as students of the academic year 2016.

1

The presentation of the subject groups follows the new typology of subject groups of the Federal Statistical Office. Therefore, the subject Informatics now belongs to the subject group Engineering and the subjects Educational Sciences and Psychology to the subject group Law, Economics and Social Sciences.

8 | Bildungsauslaender in 2011 and 2016, by federal state,

number and in % of all students in the relevant state

Federal state	2011		2016		Changes in the numbers 2011–2016 in %
	Number	in %	Number	in %	
Berlin	19,124	13.0	25,786	14.7	34.8
Saxony	9,712	8.8	15,076	13.3	55.2
Brandenburg	4,758	9.3	6,142	12.4	29.1
Saarland	3,063	12.1	3,519	11.4	14.9
Thuringia	3,529	6.6	5,707	11.4	61.7
Saxony-Anhalt	4,303	8.0	6,088	11.1	41.5
Bremen	3,685	11.6	3,999	11.0	8.5
Baden-Wuerttemberg	26,922	9.3	35,883	10.0	33.3
Hesse	17,043	8.7	21,681	8.9	27.2
Bavaria	21,155	7.4	32,688	8.7	54.5
Hamburg	5,999	7.5	7,972	8.1	32.9
North Rhine-Westphalia	40,558	7.6	57,379	7.6	41.5
Rhineland-Palatinate	8,554	7.6	9,076	7.5	6.1
Lower Saxony	11,784	7.9	14,735	7.4	25.0
Mecklenb.-W. Pomerania	1,886	4.8	2,387	6.2	26.6
Schleswig-Holstein	2,885	5.5	3,424	6.0	18.7
Total	184,960	8.3	251,542	9.1	36.0

9 | Incoming Erasmus students by federal state 2015, number and in % of all students in the relevant state

Federal state	Number	in %
Berlin	2,698	1.6
Brandenburg	677	1.4
Saxony	1,435	1.3
Bremen	454	1.3
Baden-Wuerttemberg	4,023	1.1
Bavaria	3,986	1.1
Thuringia	510	1.0
Saarland	295	1.0
Rhineland-Palatinate	1,020	0.8
Hamburg	711	0.7
Lower Saxony	1,378	0.7
Saxony-Anhalt	373	0.7
Hesse	1,320	0.6
Mecklenb.-W. Pomerania	214	0.5
North Rhine-Westphalia	3,866	0.5
Schleswig-Holstein	275	0.5
Total	23,235	0.9

10 | German and foreign first-year students and graduates 2005, 2010 and 2015, number and in % of all first-year students or graduates at German higher education institutions

	2005		2010		2015	
	Number	in %	Number	in %	Number	in %
First-year students						
German First-year students	290,192	81.5	364,478	82.0	391,107	77.2
Foreign First-year students	65,769	18.5	80,130	18.0	115,473	22.8
<i>Bildungsauslaender</i>	55,773	15.7	66,413	14.9	99,087	19.6
<i>Bildungsinlaender</i>	9,996	2.8	13,717	3.1	16,386	3.2
Graduates						
German graduates	228,750	90.6	326,225	90.2	435,154	90.4
Foreign graduates	23,732	9.4	35,472	9.8	46,434	9.6
<i>Bildungsauslaender</i>	18,302	7.2	28,208	7.8	36,370	7.6
<i>Bildungsinlaender</i>	5,430	2.2	7,264	2.0	10,064	2.1

Fig. 8

Federal Statistical Office; DZHW calculation

2010 = WS 2010/11;

2016 = WS 2015/16.

Fig. 9

Source: DAAD

An academic year in the Erasmus+ statistics begins on June 1st of the prior year and ends on May 31st of the following year. 2015 = 6/1/2014 until 5/31/2016.

Excluding placements.

The proportions of all students relate to the winter semester 2014/15.

Fig. 10

Source: Federal Statistical Office

First-year students: the sum of the number of first-year students in a summer semester and the following winter semester is the number for the year. 2015 = first-year students SS 2015 + WS 2015/16.

Graduates: an examination year includes the graduates of a winter semester and the following summer semester.

2015 = graduates WS 2014/15 + SS 2015.

GERMAN STUDENTS ABROAD

On the topic of international mobility of German students or graduates, a distinction is made between temporary study-related visits abroad as part of a domestic study programme (temporary study-related visits abroad) and study-related visits abroad with the aim of taking a degree abroad (degree-related international mobility).

The findings on **degree-related international mobility** were collected by the German Federal Statistical Office in statistical offices abroad. However, these statistics do not only include German students aiming to obtain a degree abroad, because in some cases, unknown numbers of Erasmus students and other students on temporary study-related visits abroad are included in the data.

Since there are no official statistics regarding the total number of **temporary study-related visits abroad** by German students, this can currently only be estimated on the basis of student and graduate surveys. The differences in the proportions of international mobility between the various surveys are the result of different survey periods, sampling and methodologies. However, official data are available relating to the subsection of temporary study or placement visits abroad as part of the EU's Erasmus programme. These Erasmus visits represent about one third of all temporary study-related visits abroad made by German students.



11 | European and national mobility targets and level of target achievement in Germany



European mobility target		Target achievement in Germany
Bucharest Communiqué of European ministers, 2012	By 2020, at least 20 % of graduates in the European Higher Education Area should have gained international experience in the form of degree-related or temporary study-related visits abroad. Study-related visits of at least three months’ duration or corresponding to at least 15 ECTS points are counted as temporary mobility.	
German mobility targets		Around 25 % of graduates (academic year 2013) have completed at least one study-related visit abroad (see Fig. 12). Around 20 % spent at least three months abroad. This shows that Germany has already achieved the European mobility target. The German mobility targets have not yet been achieved.
The Joint Science Conference (GWK)’s internationalisation strategy, 2013	Target A: By 2020, half of all graduates should gain study-related experience abroad. Target B: 33 % of all graduates should complete a study-related visit abroad lasting at least three months or corresponding to at least 15 ECTS points.	

12 | Graduates of German higher education institutions who have taken study-related visits abroad, in % of all graduates of higher education institutions

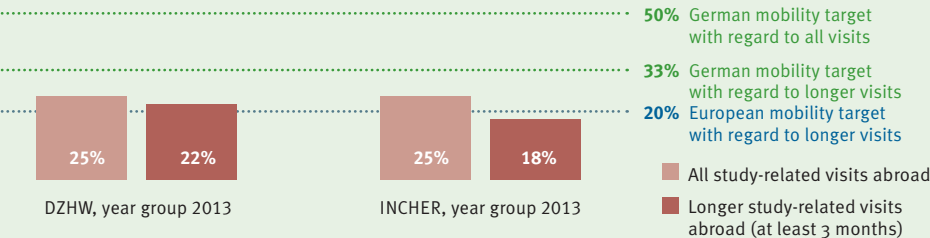
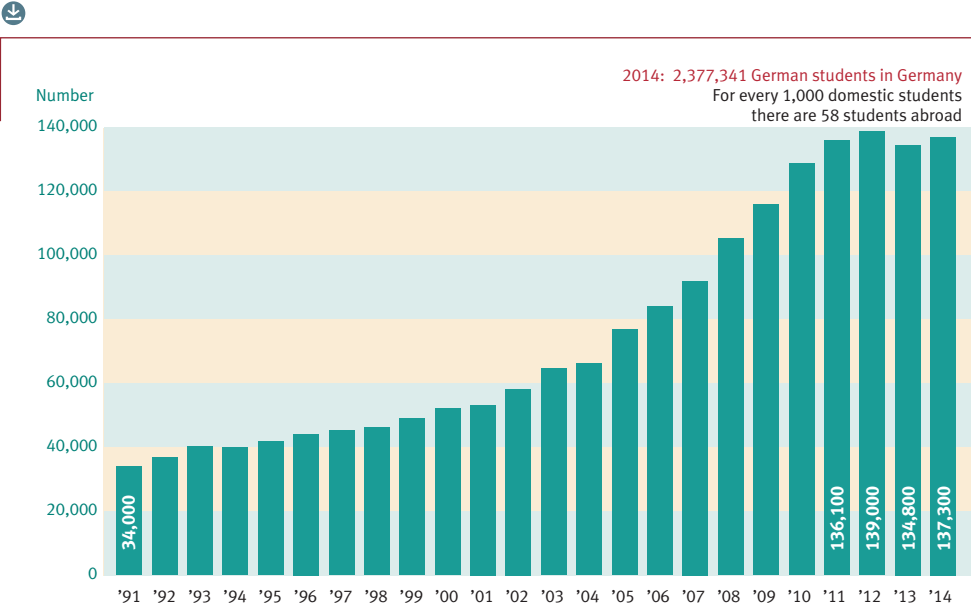


Fig. 12
Source: Graduate surveys by the German Centre for Research on Higher Education and Science Studies (DZHW) and the International Centre for Higher Education Research Kassel (INCHER).

13 | German students abroad since 1991, extrapolation



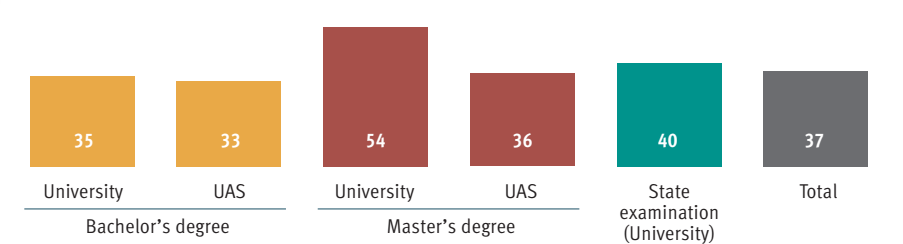
A number of countries have changed their recording of mobile students from abroad. In Austria, for example, they now collect data on international students (non-resident students) instead of foreign students (non-citizen students) as they did before. This contributes significantly to the reduction of the number of German students abroad.

Fig. 13. 14
Source: Federal
Statistical Office;
country-specific
reference periods

14 | Major host countries of German students abroad in 2014, number and in % of all German students abroad

	Number	in %
Austria	26,868	19.6
Netherlands	22,265	16.2
United Kingdom	17,059	12.4
Switzerland	14,783	10.8
USA	10,193	7.4
China	8,193	6.0
France	6,414	4.7
Sweden	4,550	3.3
Hungary	2,891	2.1
Spain	2,552	1.9
Denmark	2,530	1.8
Canada	1,795	1.3
Italy	1,415	1.0
Portugal	1,310	1.0
Norway	1,250	0.9
Australia	1,167	0.8
New Zealand	1,015	0.7
Poland	908	0.7
Belgium (Flem.)	850	0.6
Romania	830	0.6
Total	137,300	100

15 | German students in later semesters with study-related visits abroad in 2015, by type of higher education institution and type of degree, in % of all students in later semesters



16 | Erasmus participants from Germany since 1988, by type of higher education institution

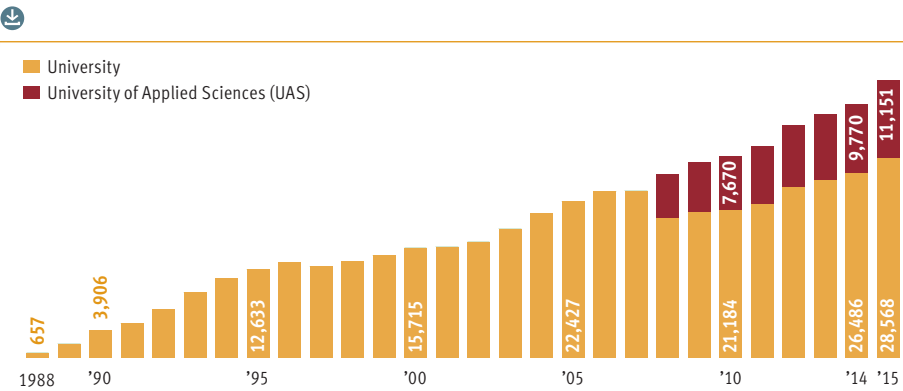


Fig. 15, 17
Source: DAAD/DZHW-International Mobility Survey 2015
Students in later semesters: bachelor: 5th–10th semester of higher education (s. o. h. e.), master: 3th–6th specialised semester, state examination: 8th–12th s. o. h. e., German “Diploma”/ “Magister” 9th–14th s. o. h. e. (U), 7th–11th s. o. h. e. (UAS)

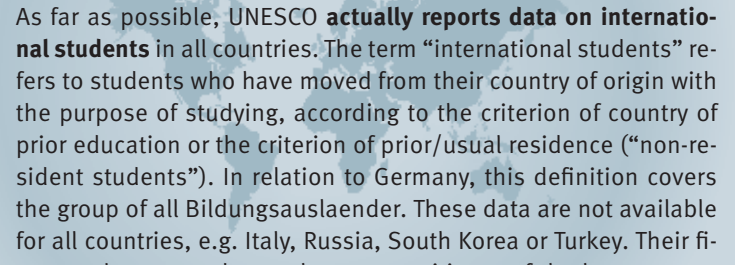
Fig. 16
Source: DAAD
Erasmus statistics until 2014: An academic year in the Erasmus statistics (until 2014) begins in the winter sem. and ends in the summer sem. of the following year. 2014 = WS 2013/14 + SS 2014.
New Erasmus+ statistics since 2015: An academic year begins on June 1st of the prior year and ends on May 31st of the following year. 2015 = 6/1/2014 until 5/31/2016.

17 | Major host countries of German students for study-related visits abroad in 2015, in %

	in %		in %
United Kingdom	14	Netherlands	3
Spain	10	Australia	2
USA	10	Finland	2
France	9	Japan	2
Sweden	6	Austria	2
China	5	Russia	2
Italy	4	Switzerland	2
Ireland	3	Czech Rep.	2
Canada	3		

INTERNATIONAL MOBILITY OF STUDENTS

“Wissenschaft weltoffen” uses **UNESCO data on international students** for its presentation of international student mobility and Germany’s position as a host country in international comparison. However, it must be observed that these figures usually differ from the equivalent data in the national statistics, because in some cases, different groups are defined as students. The UNESCO, for example, categorizes all persons as students who are assigned to levels 5 to 8 (ISCED 2011) according to the „International Standard Classification of Education“ (ISCED). In addition to studying at bachelor’s and master’s level (ISCED level 6 and 7), this also includes doctoral students (ISCED level 8) and so-called „short tertiary education programs“ (ISCED level 5), which are not counted as higher education in Germany and therefore are not part of the higher education statistics.



As far as possible, UNESCO **actually reports data on international students** in all countries. The term “international students” refers to students who have moved from their country of origin with the purpose of studying, according to the criterion of country of prior education or the criterion of prior/usual residence (“non-resident students”). In relation to Germany, this definition covers the group of all Bildungsausländer. These data are not available for all countries, e.g. Italy, Russia, South Korea or Turkey. Their figures relate to students who are not citizens of the host country (“non-citizen students”).

18 | International students by host region and region of origin 2014, in %

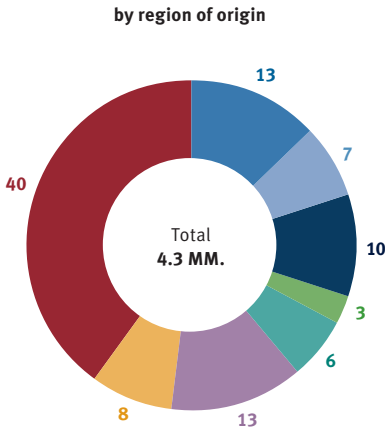
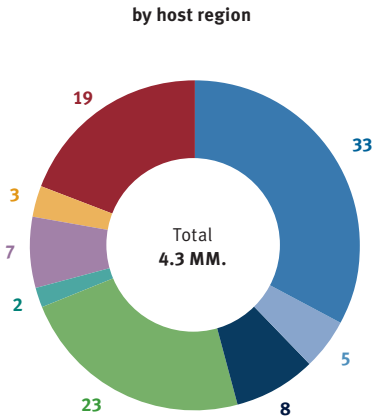


Fig. 18, 19
Source: OECD, UNESCO, country-specific reference periods

- Western, North and South Europe
- Middle and Southeast Europe
- Eastern Europe, Central Asia and South Caucasus
- North America
- Latin America
- Middle East, North Africa
- Africa, Subsahara
- Asia, Pacific

19 | International students worldwide since 1998





21 | International students by key host country and key country of origin 2014, number and in % of all international students studying worldwide

Host country	Number	in %	Country of origin	Number	in %
USA	842,384	19.6	China ³	758,253	17.6
United Kingdom	428,724	10.0	India	212,461	4.9
Australia	266,048	6.2	Germany	117,308	2.7
France	235,123	5.5	South Korea	108,615	2.5
Germany ¹	218,848	5.1	Saudi-Arabia	82,979	1.9
Russia	213,347	5.0	France	78,758	1.8
Canada ²	151,244	3.5	USA	66,354	1.5
China ³	149,102	3.5	Kazakhstan	66,290	1.5
Japan	135,803	3.2	Nigeria	65,503	1.5
Italy	82,450	1.9	Malaysia	63,088	1.5
Other countries	1,6 MM.	36.7	Other countries	2,7 MM.	62.4

22 | Mobility balances in major host countries and countries of origin in 2014, number and in % of all incoming and outgoing students

Country	Outgoing		International mobile students		Incoming	
	Number	in %	Number	in %	Number	in %
India ²	212,461	86	14	34,419	16	149,102
China ³	793,992	84	16	55,536	34	71,773
South Korea ²	108,615	66	46	218,848	65	235,123
Saudi-Arabia	82,979	54	75	213,347	79	842,384
Germany ¹	117,308	35	93	428,724	94	266,048
France	78,758	25	96			
Russia	55,190	21				
USA	66,354	7				
United Kingdom	29,606	6				
Australia	12,154	4				

Fig. 20
Source: OECD/UNESCO, country-specific reference periods

1
It should be noted that China and Singapore could not be included as host countries because no data on international students' countries of origin was available here.

2
Only host countries with at least around 15,000 incoming students from one country of origin.

3
Incl. Hongkong and Macao.

4
Unclear whether Hongkong and Macao are included.

5
Incl. Hongkong, excl. Macao.

6
Source: Federal Statistical Office, student statistics incl. doctoral students.

7
Academic year 2013.

Fig. 21, 22
Source: UNESCO, country-specific reference periods

1
Source: Federal Statistical Office, student statistics incl. doctoral students.

2
Academic year 2013.

3
Incl. Hongkong and Macao.

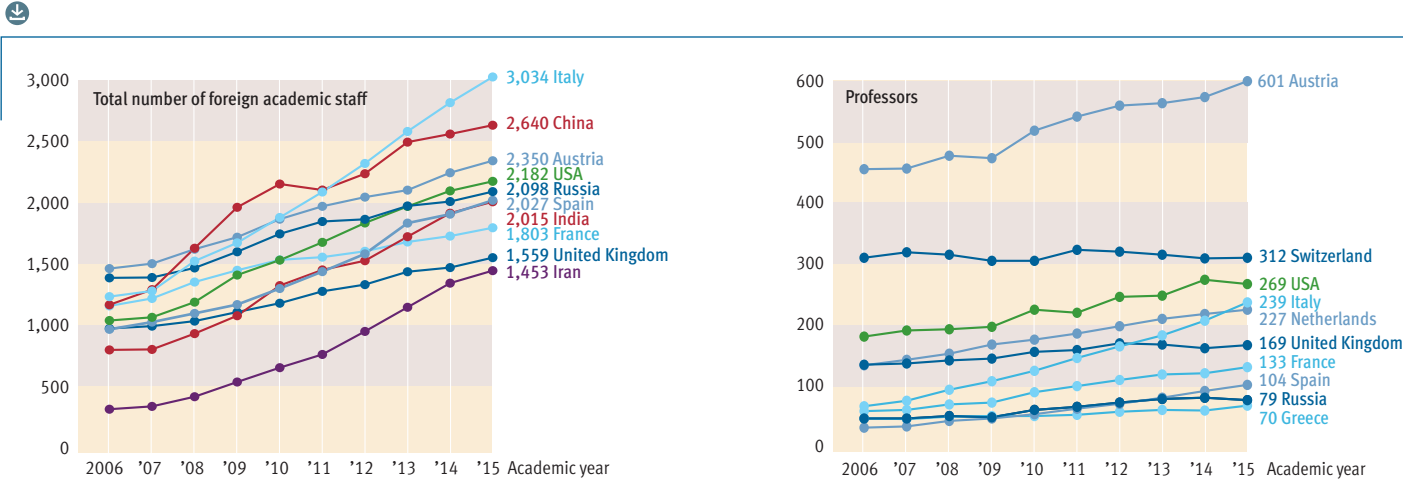
MOBILITY OF ACADEMICS AND RESEARCHERS

The mobility of academics and researchers in Germany includes both the foreign academics in Germany and German academics abroad. In relation to foreign academics in Germany, a distinction is made between **foreign staff at German higher education institutions and at non-university research institutes**, using data collected by the Federal Statistical Office as part of their higher education statistics, and **funded visits by foreign researchers**, using data collected from the relevant funding organisations by the German Academic Exchange Service (DAAD) and the German Centre for Research on Higher Education and Science Studies (DZHW) in the scope of “Wissenschaft weltoffen”. **Funded visits by German academics and researchers abroad** are also included in the data.



The DAAD and DZHW surveys only cover visits which were funded by the organisations surveyed. Visits which were supported by funds from other German and international sources are not included. The data presented here therefore include a large proportion of, but not all, funded visits by German and foreign academics and researchers.

23 | Total number of foreign academic staff and foreign professors at German higher education institutions since 2006, by key country of origin



24 | Foreign academic staff at German higher education institutions in 2009, 2012 and 2015, by staff group, number and in % of the total academic staff

	2009		2012		2015	
	Number	in %	Number	in %	Number	in %
German academic staff total	271,381	90.1	317,574	89.8	342,182	88.8
Foreign academic staff total ¹	29,661	9.9	36,116	10.2	43,129	11.2
Professors	2,297	0.8	2,780	0.8	3,098	0.8
Other academic staff	27,364	9.1	33,336	9.4	40,031	10.4

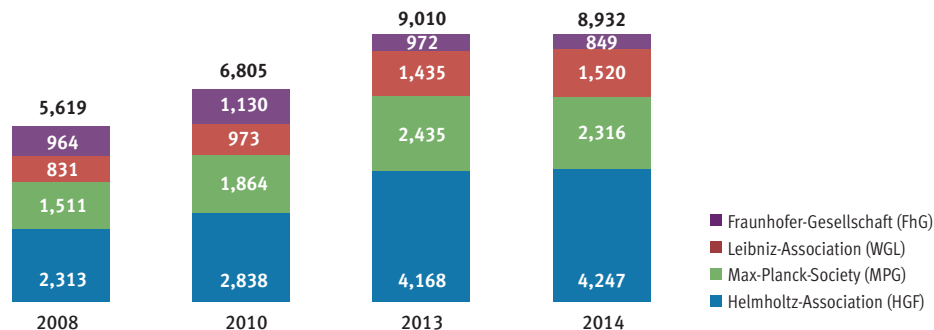
Fig. 23, 24:
Source: Federal Statistical Office

Total number of academic staff, including artistic staff at colleges of music and art as well as professors.

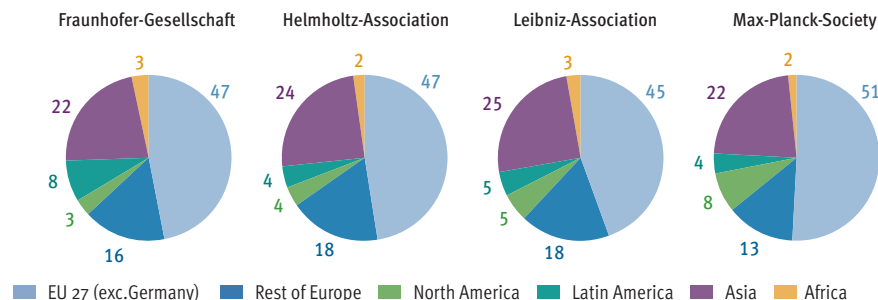
The year specified is the calendar year.
Deviations from 100 % are due to rounding.

¹ Including staff that is stateless, as well as with unexplained and unknown nationality.

25 | Foreign academic staff at the four largest German non-university research institutions in 2008, 2010, 2013 and 2014



26 | Foreign academic staff at the four largest German non-university research institutions in 2014, by region of origin, in %¹



27 | Proportion of foreign academic staff at the four largest German non-university research institutions in 2008, 2010, 2013 and 2014, in % of the total academic staff

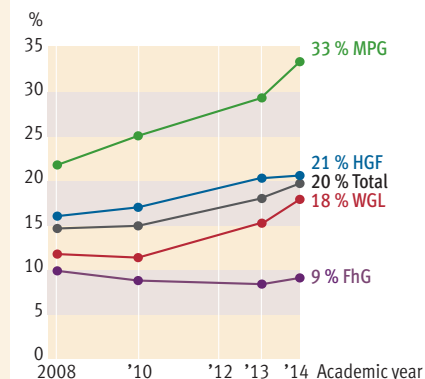


Fig. 25–27

Source: Federal Statistical Office, DZHW-calculation

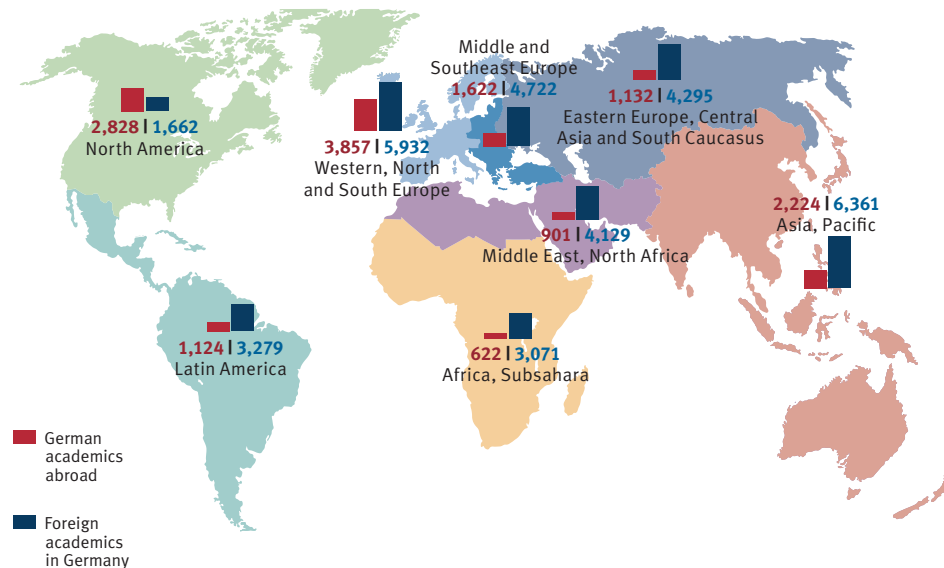
Comparability of the reporting period 2014 with previous reporting periods is reduced due to a change in the data collection.

Deviations from 100 % are due to rounding.

1

There are no data available on individual countries. The Federal Statistical Office only provides data on regions of origin.

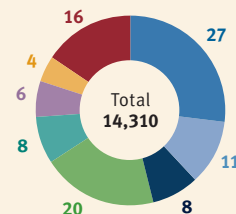
28 | Funded visits of German academics abroad and foreign academics in Germany in 2014, by host region and region of origin



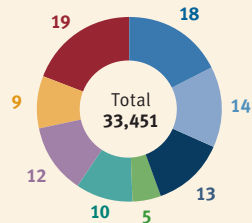
The 1,397 German and 98 foreign academics whose host regions or regions of origin are not known have not been taken into account.

Fig. 28
 Source: Numbers of the funding organisations; DZHW calculation

German academics abroad, in %



Foreign academics in Germany, in %



- Western, North and South Europe
- Middle and Southeast Europe
- Eastern Europe, Central Asia and South Caucasus
- North America
- Latin America
- Middle East, North Africa
- Africa, Subsahara
- Asia, Pacific

Wissenschaft weltoffen



The main edition of “Wissenschaft Weltoffen” contains comprehensive data and facts on the internationalisation of study and research in Germany. At www.wissenschaft-weltoffen.de you can download it as a PDF free of charge. The upcoming issue focuses on „Academic mobility and cooperation in the Baltic Sea Area“ as its main topic. It will be published in July 2017. We also present additional data and information on the “Wissenschaft weltoffen” website. There, you will find comprehensive charts, information on other evaluation options and a detailed glossary.

The German Centre for Research on Higher Education and Science Studies (DZHW) has set up a service point to provide advice to support evaluations of data from the “Wissenschaft weltoffen” data pool for individual projects and to carry out these evaluations, if required. This service is available free of charge for higher education institutions and other public institutions.

Please address your inquiries to: wissenschaft-weltoffen@dzhw.eu

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