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1 Executive Summary

Located in the heart of Europe, Germany is one of the world's largest and most influential economies as is considered a major political power both within Europe and on the international stage. Currently, it is the fourth largest economy in the world after the US, China and Japan and the largest economy in Europe. The country's economic stability and strength have been instrumental in stabilising the European Union (EU) economy during times of crisis.

With a population of around 84m, Germany is the second most populous country in Europe, behind only Russia. However, in common with many other developed nations around the world, population growth in Germany has been very slow over the last decade, with the country relying on high net immigration rates to boost the population, with the country being a popular destination for immigrants from other European countries including Romania and Poland, as well as from Asian countries such as Syria, Afghanistan and India.[1] However, as these countries increasingly experience their own demographic challenges, immigration flows are expected to slow. This is likely to lead to a shrinking of the German labour force in the years ahead, which will act as a significant drag on the country's long-term economic growth prospects.

Underpinned by healthy levels of government expenditure, Germany has a world leading domestic education system, with its higher education system ranked fourth in the world in the 2018 QS Higher Education System Strength rankings. Meanwhile, the country scored better than the OECD average in reading literacy, mathematics and science in the 2018 Programme for International Student Assessment (PISA) results, underlining the quality of its national education system.[2]

In terms of international student mobility, Germany plays an influential role both as a source market of international students and as a host market for international students from other countries. According to estimates from UNESCO, just under 124,000 German students travelled abroad to study at the higher education level in 2020, making it the world's fourth largest outbound international student market after China, India and Vietnam. The most popular international study destinations for German students include Austria, the Netherlands, the UK, Switzerland and the US.

Looking at the UK's recruitment of German international students over the last decade, there have been significant volumes of inbound students both at the undergraduate and postgraduate levels, with undergraduates accounting for a marginally higher share of the total. In terms of the volume of German students at UK HEIs, numbers consistently increased year-on-year between 2002/03 and 2010/11, peaking at almost 21,000. However, student numbers declined for several years thereafter, falling to 18,135 by 2014/15, likely due to undergraduate fee increases in England and Wales in 2012. German international student flows to the UK began to recover in 2015/16 with three consecutive years of growth, before starting to decline again in the 2018/19 academic year, falling for four consecutive years to 13,420 in 2021/22 with both Brexit and the Covid-19 pandemic

[1] International Migration Database, *OECD,* accessed September 2023, https://stats.oecd.org/viewhtml.aspx?datasetcode=MIG
[2] PISA tests are taken by students aged 15 and so are not reflective of upper secondary or tertiary education standards

weighing on student sentiment. Accordingly, German international student numbers in the UK are now about 35 per cent below previous peak levels.

Looking ahead, changes in fee arrangements for prospective international students from EU countries will pose a significant challenge for UK HEIs recruiting from Germany. Previously the UK's membership of the EU generally meant that inbound students from EU member countries were eligible for home fee status, paying the same tuition fees as British nationals. From August 2021 students arriving from the EU generally are no longer eligible for home student status, which means that they must pay international fees and will not qualify for UK government-backed student loans. Linked to this, there was a sharp decline (40 per cent) in applications for undergraduate study in the UK from EU countries in 2021/22. EU applications for 2022/23 up to the 30 June pre-clearing deadline were down again by a further 18 per cent. Looking at Germany specifically, application trends over the last couple of years have been broadly in line with the EU average, down by around 33 per cent in 2021/22 followed by a further decline of around 15 per cent in 2022/23 up to the 30 June pre-clearing deadline. In September 2021, the Turing Scheme replaced the Erasmus+ programme in providing funding for participants in UK universities to go on international study and work placements. The decision not to fund students coming to the UK as part of the Turing Scheme will also present a challenge for UK HEIs recruiting from Germany, and indeed from the EU in general.

Regarding transnational education (TNE), in the 2021/22 academic year, there were 12,565 German students enrolled on UK TNE and distance learning courses, with a broadly even balance between undergraduate and postgraduate provision. This makes Germany the UK's second largest TNE and distance learning market in Europe, only behind Greece (22,400) and well ahead of the likes of Spain (4,900), France (3,000) and the Netherlands (2,300). Contributing to this has been the fast-paced growth in Germany of late, with the number of German students enrolled on UK TNE and distance learning courses roughly doubling over the last five years. However, while the UK has made significant inroads into the TNE and distance learning market in Germany over recent years, varying regulations between states make it a difficult market to navigate for UK HEIs.

2 Introduction

This report was produced by the British Council's EU Education Insight Hub, with external research support provided by Oxford Economics.[3] It is designed to provide UK education institutions with unparalleled data, insight and analysis to support their international education strategies, recruitment activities and partnership development work. The report is also targeted at a policy maker audience, by highlighting opportunities and barriers to education and research cooperation that exist between the UK and Germany.

Using the latest data from the most reliable sources, this Market Intelligence Brief represents a window onto Germany's education system and student population, as well as the economic and demographic factors, and policy priorities and developments that shape Germany's international education outlook. The report examines various aspects related to the internationalisation of the Germany education system – including student mobility, transnational education programmes and research collaboration – and also highlights national level education projects and partnerships between the UK and Germany.

The information contained in this report is based primarily on desk-based research and data analysis, supplemented with insight and context provided by British Council colleagues on the ground in Germany.

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Comments, queries and suggestions in relation to this report are welcome and may be submitted to John McNamara, Global Head of Research, Education Insight Hubs, at John.Mcnamara@britishcouncil.org

[3] www.oxfordeconomics.com

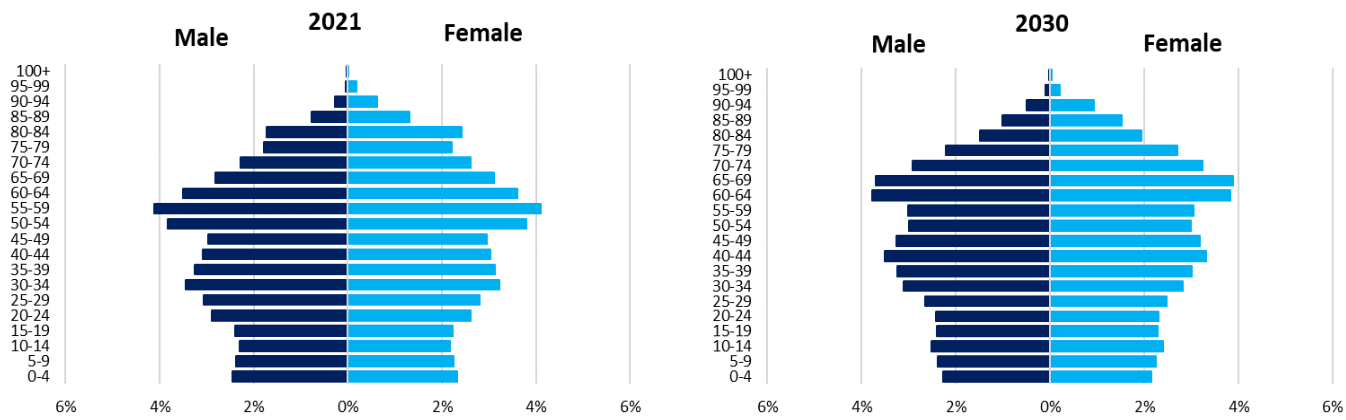
3 Macro Environment

3.1 People

With a population of around 83m in 2021, Germany was the second most populous country in Europe, behind only Russia (144m) and followed by France (68m) and the UK (67m).[4] In common with many other developed nations around the world, population growth in Germany has been very slow over the last decade, averaging just 0.2 per cent per year. This reflects the country's low fertility rate of 1.6 births per woman, which is well below the fertility replacement rate for developed countries of 2.1.[5] In fact, population growth in Germany over the last decade has been largely driven by high net immigration rates, with the country being a popular destination for immigrants from other European countries, as well as from Asia. Looking ahead, the UN Population Division forecasts that after peaking at around 83.4m in 2022, Germany's population will decline slowly year-on-year over the coming years, falling to around 82.7m by 2030 and declining further to around 81.2m by 2040. However, the most recent data from the German Federal Statistical Office instead estimated that the country's population increased to over 84m in 2023.

In the years ahead, Germany's population is also expected to age considerably. In 2021, the 0-14 age group accounted for 14 per cent of the total population, while the 65+ age group accounted for 22 per cent. By 2030, it is expected that the 0-14 share will have remained stable at around 14 per cent, while in contrast, the 65+ share is forecast to rise to 26 per cent, accounting for more than one quarter of the German population.

Figure 1: Germany's population pyramid, 2021 and 2030



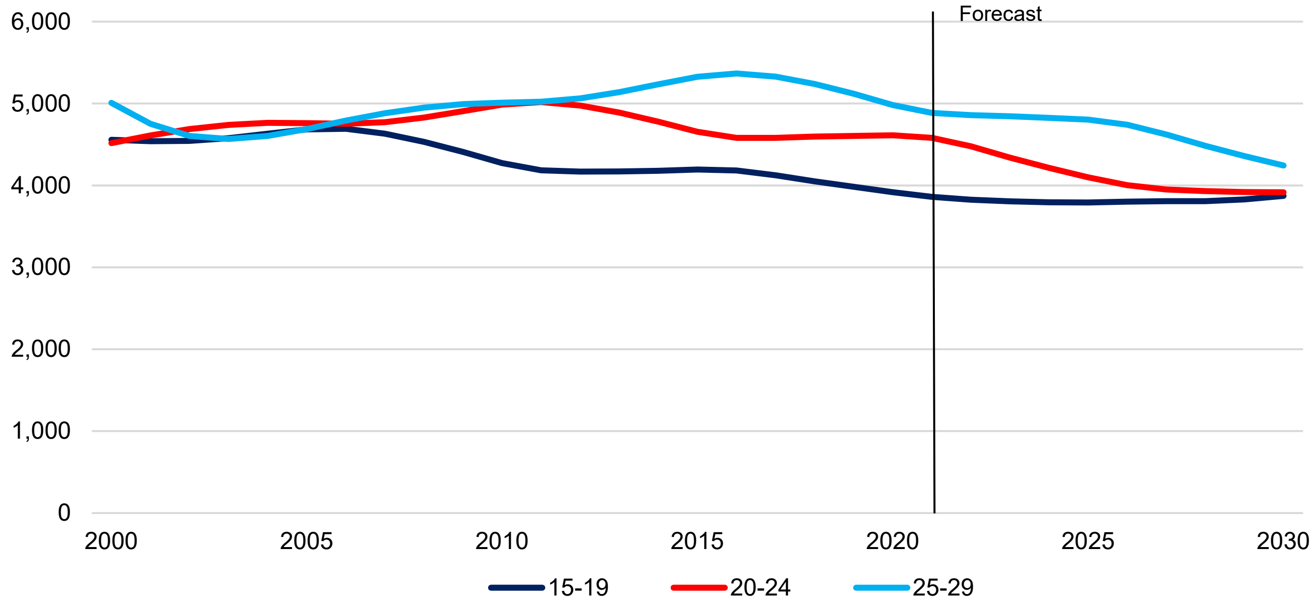
Source: UN Population Division

Looking specifically at the population age bands of interest to UK HEIs, these have shown diverging trends over the last two decades. The population in the 15-19 age band has generally been on a

[4] World Population Prospects, *United Nations Population Division,* 2022, https://population.un.org/wpp/
[5] Fertility rate (total), *World Bank*, accessed August 2023, www.data.worldbank.org/indicator/SP.DYN.TFRT.IN

downward trajectory, falling from around 4.5m in 2000 down to around 3.9m at present. In the 20-24 age band, population growth has fluctuated over the period, starting at around 4.5m in 2000 and rising to just over 5m in the early 2010s, before declining back to around the 4.5m mark at present. Similarly, the population aged 25-29 has experienced periods of growth and decline over the last two decades, and overall has declined marginally from just over 5m in 2000 to around 4.9m at present. Looking ahead, and taking the 15-29 age group in aggregate, the population is expected to decline by around 1m by 2030, falling to around 12m by the end of the decade.

Figure 2: Germany's student age population (000s)



Source: UN Population Division

According to the UN, approximately 78 per cent of the German population live in urban areas, which is just below the Western Europe average of around 80 per cent. The urbanisation rate in Germany is expected to rise marginally to 79 per cent by 2030, and further to 84 per cent by 2050.[6] The most densely populated regions in Germany are generally located in the western and southern regions of the country. However, Berlin, located to the east of the country, is Germany's most populous city with a population of 3.6m, followed by Hamburg (1.8m) and Munich (1.6m).[7]

Germany is a secular state, however approximately half of the population identify as Christian - either Roman Catholic (26 per cent) or Protestant (24 per cent). Muslims account for almost 4 per cent of the population. Meanwhile, more than 40 per cent of the German population have no religious affiliation.

The vast majority of the German population speak German as their first language. However, strong English language skills are widespread and according to the English First (EF) English Proficiency Index, Germany has been at a 'very high' proficiency level since 2018. Germany ranks 10th out of 111 countries in terms of English proficiency, and 9th out of 35 European countries.[8]

[6] World Urbanisation Prospects, *United Nations Population Division,* 2018, https://population.un.org/wup/
[7] World cities, *World Population Review*, 2023, www.worldpopulationreview.com/world-cities
[8] English Proficiency Index, *English First,* 2022, www.ef.com/wwen/epi/regions/europe/germany/

3.2 Economy

Located in the heart of Europe, Germany is one of the world's largest and most influential economies. West Germany was a founding member of the European Economic Community (EEC) in 1957, before the reunified Germany became one of the founding members of the European Monetary Union (EMU) in 1992, with Germany then adopting the euro as a currency in 2002. Currently, it is the fourth largest economy in the world after the US, China and Japan and the largest economy in Europe. The country's economic stability and strength have been instrumental in stabilising the EU economy during times of crisis.

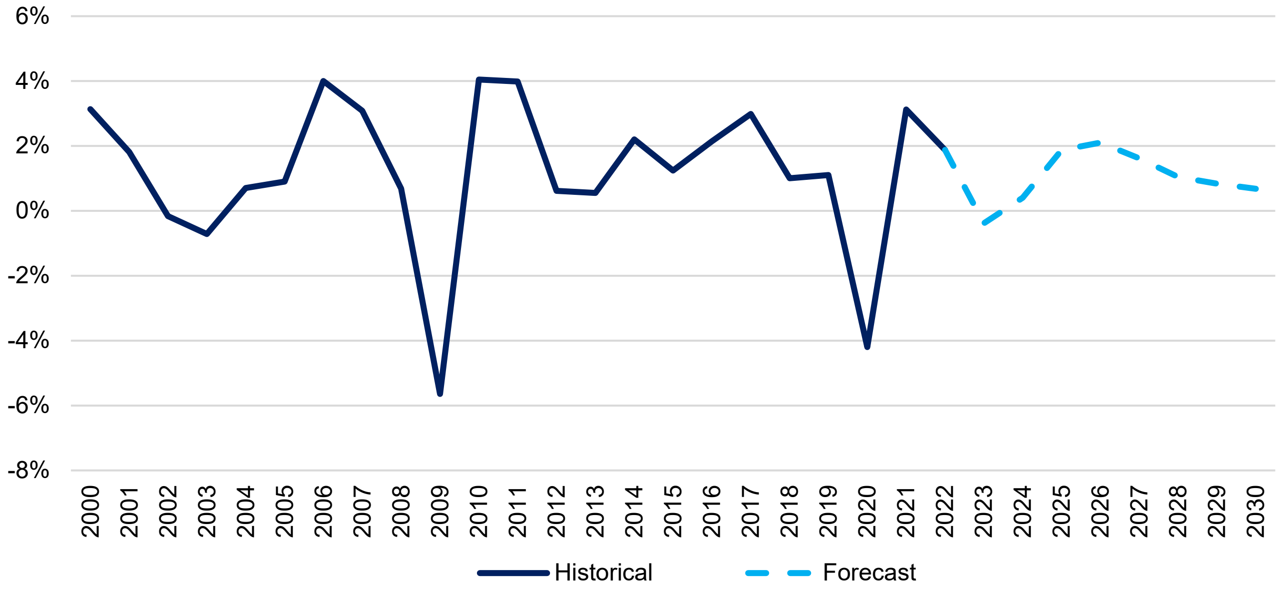
The German economy is globally recognised as an industrial powerhouse, known for its prowess in manufacturing, particularly in sectors like automotive, machinery, chemicals and electronics, with companies such as Volkswagen, BMW, Siemens and BASF global leaders in their respective industries. The strength and global influence of Germany's economy has been built upon exports, which have accounted for just under half of German GDP over the last decade. The "Made in Germany" label has become synonymous with quality and precision, contributing significantly to the country's exporting success. However, the importance of industry and exports means Germany is sensitive to external economic shocks and is dependent on global supply chains. This explains why it suffered a particularly deep recession during the Global Financial Crisis and a sluggish recovery from the pandemic, although the impact on the labour market was muted thanks to the country's well-established furlough scheme.

The German economy returned to pre-pandemic output levels by early 2022, with GDP growth of around 1.9 per cent recorded last year. However, the country's GDP declined in the final quarter of 2022 and again in the first quarter of 2023, before stagnating in the following quarter, with high energy prices, rising interest rates and a slowdown in trade with China – its second largest export market – hitting its economy particularly hard.

According to Oxford Economics' latest forecasts, the German economy will continue to stagnate for the remainder of 2023 as opposing forces mostly offset each other. Weak foreign demand and tighter monetary policy will continue to be a major drag on industry and investment, while easing supply woes, falling energy prices and sharply slowing inflation will support consumer prospects. Overall, a small contraction in GDP of 0.3 per cent is expected for the year. A very modest return to growth is expected in 2024 with growth of 0.4 per cent anticipated, before stronger growth of around 2 per cent per year is restored in the medium term between 2025 and 2027.

In the long-term, the German economy is expected to grow at less than 1 per cent per year, which is a significant slowdown on previous decades. This reflects the weak demographic outlook and the expectation that the German labour force will shrink in the years ahead. The current government intends to improve immigration prospects to alleviate this issue, building on the initiatives of its predecessors. But labour market immigration rules are already comparatively lax, and traditional countries of origin for inward migration from Eastern Europe are increasingly facing their own labour constraints.

Figure 3: Germany's real GDP growth



Source: Haver Analytics / Oxford Economics

In 2022, Germany's GDP per capita stood at US$48,600 (in nominal terms), which was ahead of both the EU average (US$37,100) and the levels seen in the UK (US$45,500) and France (US$40,850). By 2030, Germany's GDP per capita is projected to rise to approximately US$75,500. However, it should be noted that this strong nominal growth is supported by high current levels of inflation and anticipated euro appreciation against the dollar, with underlying real growth more muted. Nonetheless, the forecast rise in GDP per capita should underpin a continued expansion of middle and high income households. At present in Germany there are around 25.9m households with an income above US$35,000 per year, which is expected to rise to 27.9m by 2030.

After falling against the US dollar in 2018 and 2019 and then recovering somewhat in 2020 and the first half of 2021 to 1.20 dollars per euro, the euro was on a downward trend for most of 2022, falling to a 20-year low in August 2022, to below parity with the dollar. Aggressive interest rate rises in the US were one of the factors behind the fall in the euro against the dollar, along with the worsening outlook for the eurozone economy. But a string of rate hikes by the European Central Bank (ECB), signs of monetary policy tightening in the US nearing its peak, and the alleviation of the energy crisis have helped contain the downward pressure more recently, letting the euro rise close to US$1.10. Still, the uptrend will be constrained by the ECB's comparatively cautious monetary policy path and Europe's weak growth outlook. Looking further ahead, Oxford Economics expects that a value of around US$1.25 will be reached by the late 2020s. From a student mobility perspective, recent euro weakness is likely to incentivise intra-EU student flows and is also likely to help eurozone countries attract a greater number of inbound students from outside the bloc. However, projected euro appreciation over the medium term will have the opposite effect, boosting the international purchasing power of European students and making Europe a more expensive study destination for inbound students from other parts of the world.

3.3 Government and education policy

Germany is a federal parliamentary republic with a multiparty political system. It is governed by the Basic Law (Grundgesetz), which serves as the country's constitution. The political system is characterised by a division of powers among the federal government and 16 individual states (Länder). Each of Germany's 16 federal states have their own constitution and government, with significant autonomy in areas such as education and law enforcement while matters such as foreign policy and defence are the responsibility of the federal government. However, there is an attempt to maintain a degree of uniformity among the states through joint consultative bodies.

The Chancellor is the head of government in Germany and is the leader of the majority party or coalition in the Bundestag, while the President is the head of state and performs a mostly non-political role. Germany has two main large parties, the Christian Democratic Union (CDU) and the Social Democratic Party of Germany (SPD), neither of which can easily attain a parliamentary majority. This is due to the fragmented nature of Germany's political party landscape, and the fact that the proportional representation form of electoral voting often ensures that no single party can achieve the necessary 50 per cent threshold to form a government on its own.[9]

In late 2021, the so-called "traffic light" coalition of the SPD, the Greens, and the liberal Free Democrats (FDP) replaced the previous governing coalition of the Christian Democratic Union (CDU) and Christian Social Union (CSU). The new coalition says "future proofing" the economy is its main mission. It is focused on climate change mitigation, digitalisation, and modernisation of the public sector. This coalition may also be relatively well placed to ease immigration rules, which could help reduce demographic headwinds over the coming years as discussed prior. However, crucially, there is only limited scope for a structurally loosened fiscal stance given the FDP's fiscal conservatism. This will also limit the odds of significant eurozone governance reform.

Germany's education system is decentralised, meaning that each of the 16 federal states is responsible for its own education policies, curriculum, and school administration at all levels of education. The Standing Conference of Ministers of Education and Cultural Affairs (KMK) is a national body comprising education ministers from each federal state, which seeks to encourage coordination among the states regarding common education standards, frameworks, and guidelines. The majority of HEIs in Germany are financed by the state, and generally fees are not charged for bachelor's courses and most master's programs at these institutions.

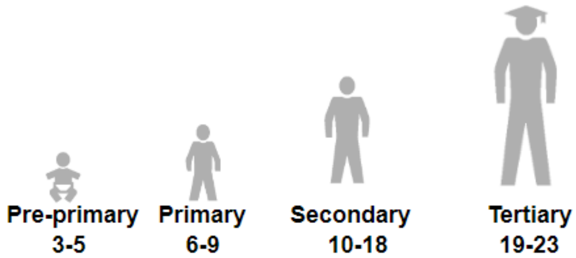
[9] Germany: Government and society, *Britannica*, 2023, www.britannica.com/place/Germany/Government-and-society

4 Domestic Education Environment

4.1 Overview

The education system in Germany is built around four key stages: pre-primary, primary, secondary, and tertiary education. Education is compulsory from age 6 to 15 (primary and lower-secondary), however German education generally lasts until the age of 18. Education in Germany is generally decentralised to each state, however the KMK sets national standards for German and mathematics at the elementary level, and at the secondary level for German, mathematics, a foreign language and natural and social sciences.[10]

Figure 4: Official school ages in Germany, by level of education



Source: UNESCO

According to the latest PISA results from 2018, Germany performed above the OECD average in reading literacy, mathematics and science with scores of 498, 500 and 503 against the OECD average of 487, 489 and 489 respectively. However, socio-economic status explained 19 per cent of the variation in science performance in Germany, compared to an OECD average of 13 per cent. Moreover, in Germany, school principals reported more staff shortage and greater material shortage than the OECD average, and school principals of disadvantaged schools more often reported staff shortages than principals of advantaged schools. This indicates that while education standards in Germany are generally high, outcomes for disadvantaged students remain a significant challenge.[11]

Between 2010 and 2021 government spending on education as a share of GDP in Germany averaged around 4.3 per cent, below the EU average of 4.8 per cent, according to Eurostat. Meanwhile, as a share of total government expenditure, spending on education averaged 9.7 per cent between 2010 and 2021, which although slightly below the EU average of 9.9 per cent, is slightly ahead of the average education spend shares seen in comparable economies such as France (9.6 per cent) and Spain (9.5 per cent).

[10] The German education system, *Expatica*, 2023, www.expatica.com/de/education/children-education/education-in-germany-101611/
[11] Germany student performance (PISA 2018), *OECD*, 2018, www.oecd.org/pisa/publications/PISA2018_CN_DEU.pdf

4.2 Early years, primary, secondary

Since 2013, German's have had a legal right to early childhood education and care from the age of 12 months, and since 1996 a legal entitlement has existed pertaining to day care for children from the age of 3 until before they start primary school at age 6. These efforts to expand access to pre-primary education have led to an increase in the pre-primary gross enrolment ratio from around 91 per cent in 1997 to 108 per cent in 2020.[12] However, demand for childcare currently outstrips supply in Germany, with an estimated shortage of around 384,000 day-care places in 2023. The majority of this shortage (94 per cent) is concentrated in the West of Germany.[13]

Pupils under the age of three have the option to attend nursery (Kinderkrippen), while pre-schools (Kindergarten) accept pupils aged three to six. Most pre-school education in Germany is offered by privately-run providers rather than local authorities, and fees vary across regions. Pre-school education is focused on the development of pupils' communication and language skills and their integration into daily activities.

The compulsory age to start primary education (Grundschule) in Germany is six. The primary language of instruction in Germany's primary and secondary education system is German, and most students learn English as their first foreign language. Primary education lasts for four years (grades 1-4) in almost all states. However, primary education lasts for an additional two years (to grade 6) in Berlin and Brandenburg.

Following the primary school stage, secondary education in Germany is characterised by division into a range of different educational paths with their respective leaving certificates and qualifications for which different school types are responsible. Specifically, lower secondary education last for four years (usually grades 5-9) and is compulsory for all students. Students are typically streamed into three different types of schools at this level:

- Hauptschule: This is the least academic track and prepares students for vocational training.
- Realschule: This is a more academic track than the Hauptschule and prepares students for either vocational training or further education.
- Gymnasium: This is the most academic track and prepares students for university.

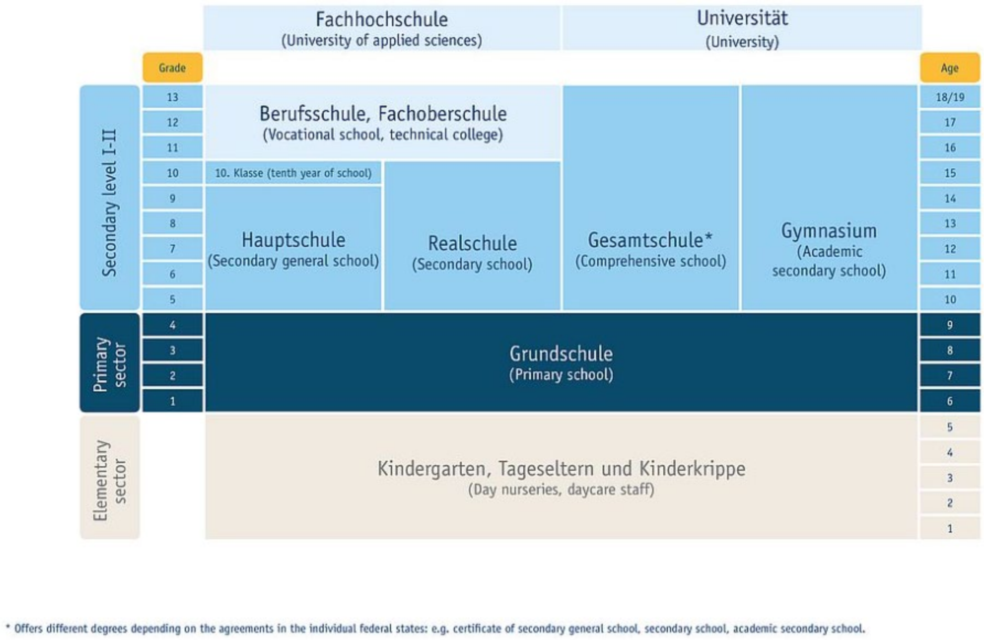
Hauptschulen and Realschulen exist in large numbers in only five of Germany's 16 states, with other states instead having integrated comprehensive schools (Gesamtschule) that cover all grades and bring together the educational pathways of Hauptschulen, Realschulen and Gymnasiums.

After completing lower secondary education, students in Germany have the option of progressing to upper secondary education for an additional 3-4 years, but this is not compulsory. Students can choose to continue at a Gymnasium and take the Abitur, which is the university entrance

[12] Pre-primary school enrolment (% gross), *World Bank*, accessed April 2023, www.data.worldbank.org/indicator/SE.PRE.ENRR
[13] Germany to be short of 384,000 Kita places 'by 2023', *The Local*, 2022, www.thelocal.de/20221020/germany-to-be-short-of-384000-kita-places-by-2023
The Education System in the Federal Republic of Germany: Early Childhood, *KMK*, 2018, www.kmk.org/fileadmin/Dateien/pdf/Eurydice/Bildungswesen-engl-pdfs/early_childhood.pdf

qualification. They also have the option of attending a Berufsschule or Fachoberschule, which offer vocational and technical pathways.

Figure 5: Germany's education system



Source: Make it in Germany

Germany is currently facing a significant shortage of qualified teachers, particularly in the subjects of mathematics, science, music and art. Estimates of this shortage vary, with the KMK putting the scale at 12,000 teachers nationwide while other groups such as the German Teachers' Association believe the number is much higher. To address this shortage, the government will likely have to attract greater numbers of international teachers to its schools and universities through simplifying the application process and reducing bureaucratic hurdles.[14]

4.3 Technical & vocational education and training

Germany has generally had the lowest youth unemployment rate in the EU, which is a reflection of the success of its dual education system, which is a system of vocational training that combines classroom instruction with on-the-job training. This system provides young people with the in-demand skills and experience they need to find a job after they leave the education system, through close collaboration between the education system, employers and trade unions.

[14] Germany's schools are running out of teachers, *DW*, 2023, www.dw.com/en/germanys-schools-are-running-out-of-teachers/a-64541184#:~:text=Astrid%2DSabine%20Busse%2C%20who%20chairs,%2C%20physics%2C%20music%20and%20art.

Technical and vocational education and training (TVET) in Germany is offered at both secondary and tertiary levels and the system is overseen by GOVET (German Office of Vocational and Educational Training).[15]

At the secondary level of education, TVET can take the form of one of four types of courses. Transition programmes are designed to help young people who are struggling to find an apprenticeship or who need additional support to succeed in the dual education system. These programmes can provide young people with counselling, training, and work experience to help them make a successful transition to the world of work. These typically last one year and are equivalent to European Qualifications Framework (EQF) levels 1-2, or Level 1 on the UK's Regulated Qualifications Framework. There are also general education programmes with vocational orientation and school-based VET programmes that are equivalent to EQF level 4 (RQF level 3). The former requires an intermediate secondary school certificate, while the latter accepts lower secondary school certifications, however both are offered at full-time vocational schools and can involve traineeships. The final form of TVET programmes are dual VET courses (apprenticeships), where students mostly train within an enterprise but spend around one week per month learning theoretical and practical knowledge in a vocational school, the entry requirement for which is the completion of compulsory education.

It is also possible to receive advanced vocational training (AVT) at the tertiary level in Germany, leading to qualifications at EQF level 6 (RQF level 6), though these generally require several years of practice in the relevant industry as a prerequisite. Dual study programmes also exist that award double qualifications of both a vocational qualification and bachelor’s or master’s degree.[16]

Although in the past around half of secondary school graduates in Germany have chosen a vocational pathway, in recent years there has been an increasing trend towards pursuing academic routes at the expense of vocational occupations. According to the Central Association for Skilled Crafts in Germany (ZDH), in 2022 there was a shortage of around 250,000 skilled craftspeople, owing to relatively low emigration to Germany and unfilled apprenticeship places from domestic students. Moreover, the green transition is expected to increase demand for an additional 60,000 workers in the plumbing and heating sector alone that will require vocational training. To confront this issue Germany has sought to make its TVET fit for the future, and in 2020 amended its Vocational Training Act with the intent of making it more attractive to young people. The changes included a minimum remuneration for trainees, simplified processes to complete training on a part-time basis and enabling training progression internationally.[17]

[15] Vocational education and training in Europe: Germany, *European Centre for the Development of Vocational Training,* 2018, www.cedefop.europa.eu/en/country-reports/vocational-education-and-training-europe-germany-2018
[16] VET in Germany, *European Centre for the Development of Vocational Training*, 2018, www.cedefop.europa.eu/files/4168_en_de.pdf
[17] Workers for Future: Germany’s dual vocational training under stress, *Euractiv*, 2023, www.euractiv.com/section/economy-jobs/news/workers-for-future-germanys-dual-vocational-training-under-stress/

4.4 Higher education

Upon completion of secondary level education, students in Germany can progress to the higher education level at several different types of HEIs. The three main types of HEIs are universities, colleges of art and music, and technical universities and *Fachhochschulen* - also known as universities of applied sciences. The tertiary sector also includes professional academies (*Berufsakademien*) which offer practical orientated degrees through Germany's dual system of education. Universities and equivalent institutions that offer minor study courses, such as theological universities, are distinct in their entitlement to award doctorate (*Doktograd*) accreditations. Colleges of art and music offer courses on subjects such as visual and performing arts, fine arts and digital media. While both technical colleges and professional academies provide TVET, technical colleges generally specialise in offering STEM-related degrees lasting two years, while professional academies provide more specialised training related to a specific profession and the degrees typically last a minimum of three years.[18]

According to Eurostat, in 2021, Germany had 3.4m tertiary education students, making it the largest tertiary student population in the EU. In 2021, 61 per cent of total tertiary education students were enrolled at bachelor's level, 33 per cent at master's level and 5.7 per cent on doctoral programmes. The remaining 0.3 per cent were engaged in short-cycle courses.[19]

According to the Federal Statistic Authority of Germany, there are 423 public and private HEIs in Germany, of which there are 108 universities, 6 colleges of education, 16 colleges of theology, 52 colleges of art and music, 211 specialised colleges of higher education and 30 colleges of public administration.[20]

The majority of HEIs in Germany are financed by the state, and generally fees are not charged for bachelor's courses and most master's programmes at these institutions. Tuition fees may be charged for some master's courses whenever a student wishes to pursue a subject different to that which they specialised in for their bachelor's. The tuition-free rule for public universities also applies to international students, except in the State of Baden-Württemberg which from 2017 began charging non-EU citizens tuition fees of EUR 1,500 per semester for bachelor's and master's courses – although in 2023 the state voted to reverse this policy and abolish tuition fees once more. While public universities do not charge for tuition, students must pay an administration fee, which usually costs EUR 100 to 350 per semester. Tuition fees charged at private HEIs in Germany typically start from EUR 6,000 per year, but can vary considerably depending on the degree level, course of study and institution.[21]

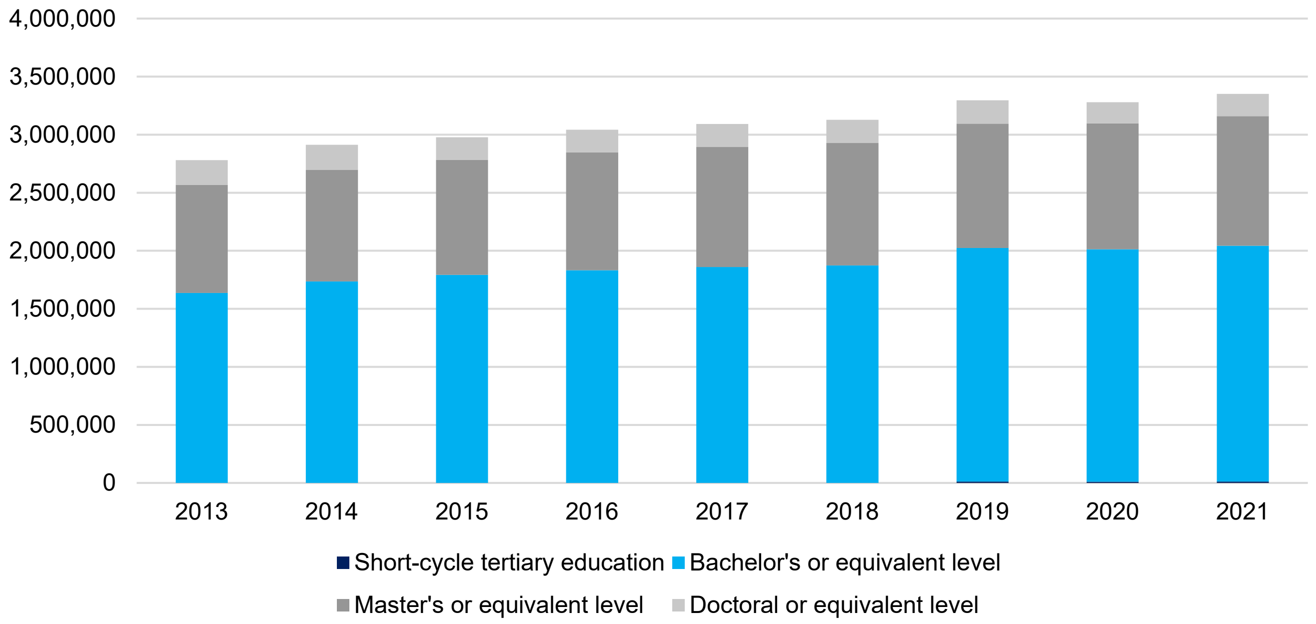
In 2023, 11 of Germany's universities were ranked in the world's top 200, according to the QS World University Rankings. The highest-ranking university in Germany is the Technical University of Munich, which is ranked 49th in the world and 12th in Europe. The second-highest ranking university in Germany is the Ludwig Maximilians University of Munich (59th), followed by

[18] The Education System in the Federal Republic of Germany: Tertiary, *KMK*, 2018, www.kmk.org/fileadmin/Dateien/pdf/Eurydice/Bildungswesen-engl-pdfs/tertiary.pdf
[19] Students enrolled in tertiary education by education level, programme orientation, sex, type of institution and intensity of participation, *Eurostat*, accessed September 2023, www.ec.europa.eu/eurostat/databrowser/view/EDUC_UOE_ENRT01/default/table?lang=en
[20] Total of higher education institutions, *Destatis Statistisches Bundesamt*, Accessed September 2023, www.destatis.de/EN/Themes/Society-Environment/Education-Research-Culture/Institutions-Higher-Education/Tables/type-institution.html
[21] How much does it cost to study in Germany, *Erudera*, accessed April 2023, www.erudera.com/germany/how-much-does-it-cost-to-study-in-germany/#:~:text=Germany%20offers%20high%2Dquality%20education,higher%20than%20250%20EUR%2Fsemester

Heidelberg University (65th), Freie Universität Berlin (118th), and the Humboldt University of Berlin (131st).[22]

In recent years Germany has increased its funding to the higher education sector to improve its quality of teaching. In 2021 the coalition government extended its Excellence Strategy and pledged to raise funding for universities by 3 per cent per year from 2022 to 2027. This strategy also targets an increase in government spending on R&D to 3.5 per cent of GDP by 2025, the funding of which will extend to scientific and research-related activities pursued by universities.[23]

Figure 6: German tertiary education enrolments



Source: Eurostat

[22] World University Rankings 2023, *QS Top Universities,* 2023, www.topuniversities.com/university-rankings/world-university-rankings/2023
[23] New German government promises funding boost for universities, *Times Higher Education*, 2021, www.timeshighereducation.com/news/new-german-government-promises-funding-boost-universities

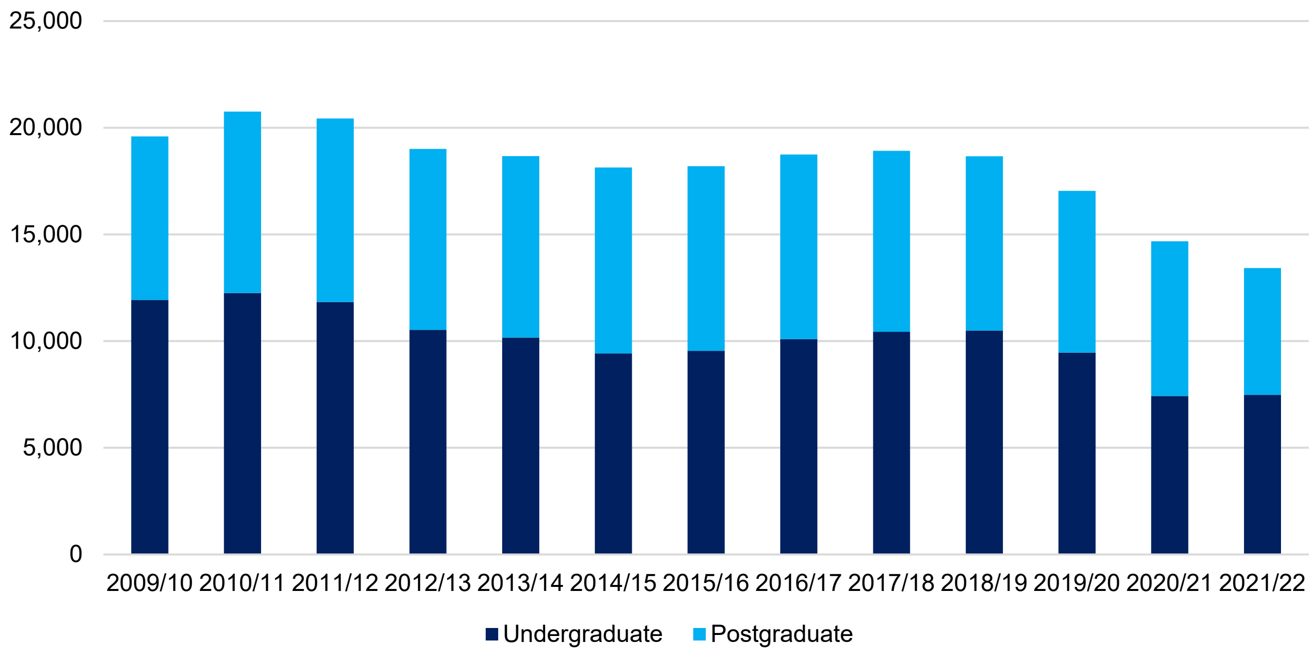
5 International Education

5.1 Student mobility

The German government is a keen supporter of outbound international student mobility and seeks to ensure that 50 per cent of higher education graduates has gained study-related experience abroad and at least one in three can provide evidence of a period of study abroad lasting at least three months or equivalent to 15 ECTS.[24] [25]

According to estimates from UNESCO, just under 124,000 German students travelled abroad to study at the higher education level in 2020, making it the world's fourth largest outbound international student market after China, India and Vietnam. After showing strong and consistent growth for much of the last two decades, outbound student numbers have stabilised over the last few years at around the current level. The most popular international study destinations for German students are European countries (Austria, the Netherlands, the UK, Switzerland) followed by the US.

Figure 7: German students in HE programmes in the UK



Source: HESA

Looking at the UK's recruitment of German international students over the last decade, there have been significant volumes of inbound students at undergraduate and postgraduate levels, with undergraduates accounting for a slightly higher share of the total. In terms of the volume of

[24] The European Credit Transfer and Accumulation System (ECTS) is the standardised system allowing credits taken at one higher education institution to be counted towards a qualification studied for at another, adopted by most countries in the European Higher Education Area. https://education.ec.europa.eu/education-levels/higher-education/inclusive-and-connected-higher-education/european-credit-transfer-and-accumulation-system

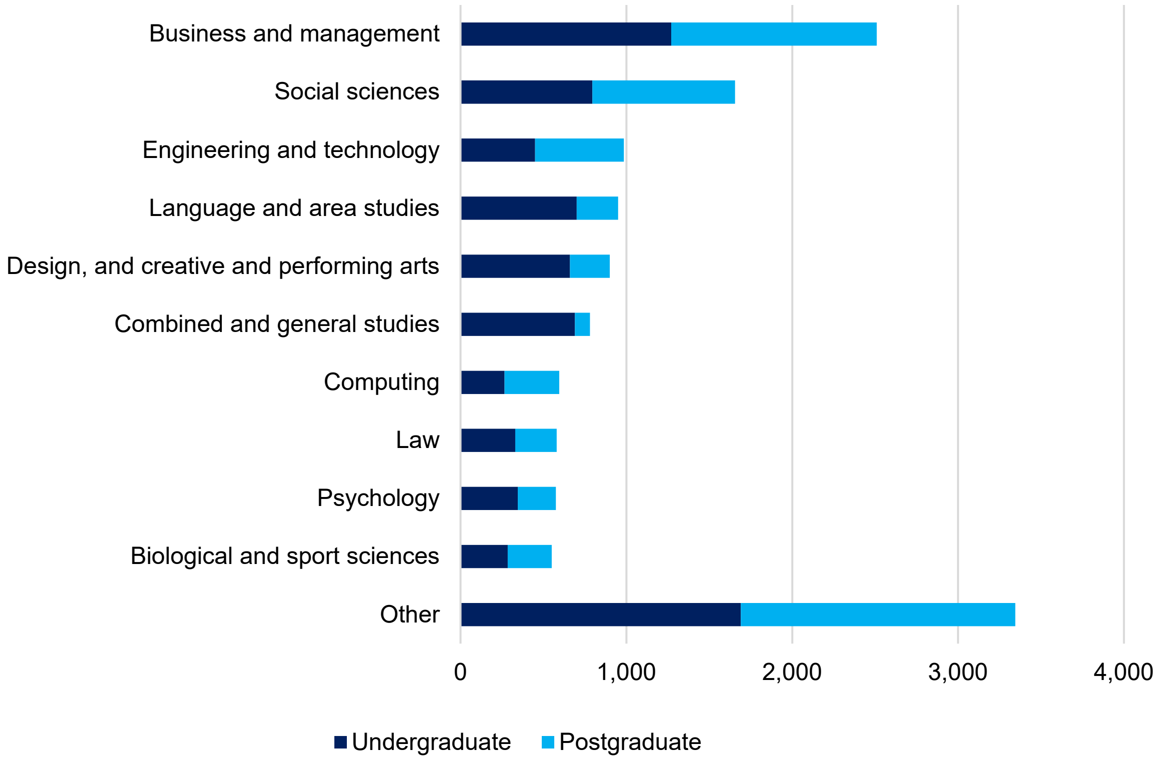
[25] Mobility and higher education: Germany, *Eurydice*, 2023, www.eurydice.eacea.ec.europa.eu/national-education-systems/germany/mobility-higher-education

German students at UK HEIs, numbers consistently increased year-on-year between 2002/03 and 2010/11, peaking at almost 21,000. However, student numbers declined for several years thereafter, falling to 18,135 by 2014/15, likely due to the UK's undergraduate fee increases in 2012. German international student flows to the UK began to recover in 2015/16 with three consecutive years of growth, before starting to decline again in the 2018/19 academic year, falling for four consecutive years to 13,420 in 2021/22 with both Brexit and the Covid-19 pandemic weighing on student sentiment. Accordingly, German international student numbers in the UK are now about 35 per cent below previous peak levels.

Looking ahead, changes in fee arrangements for prospective international students from EU countries will pose a significant challenge for UK HEIs in the German market. Previously the UK's membership of the EU generally meant that inbound students from EU member countries were eligible for home fee status, paying the same tuition fees as British nationals. From August 2021 students arriving from the EU generally are no longer eligible for home student status, which means that they must pay international fees and will not qualify for UK government-backed student loans. Linked to this, there was a sharp decline (40 per cent) in applications for undergraduate study in the UK from EU countries in 2021/22. EU applications for 2022/23 up to the 30 June pre-clearing deadline were down again by a further 18 per cent. Looking at Germany specifically, application trends over the last couple of years have been broadly in line with the EU average, down by around 33 per cent in 2021/22 followed by a further decline of around 15 per cent in 2022/23 up to the 30 June pre-clearing deadline. In September 2021, the Turing Scheme replaced the Erasmus+ programme in providing funding for participants in UK universities to go on international study and work placements. The decision not to fund students coming to the UK as part of the Turing Scheme also presents a challenge for UK HEIs recruiting from Germany, and indeed from the EU in general.[26]

[26] International students in UK higher education, *UK Parliament,* 2022, www.commonslibrary.parliament.uk/research-briefings/cbp-7976/

Figure 8: Subjects studied by German HE students in the UK, 2021/22



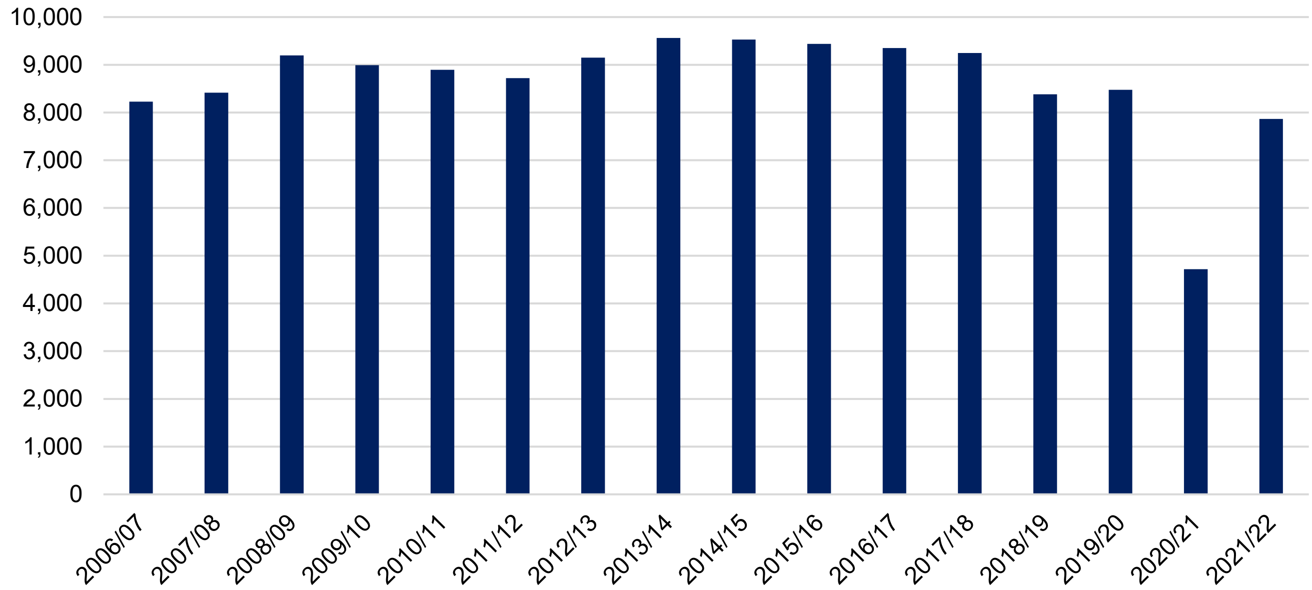
Source: HESA

In terms of subject area choices, business and management was the most popular for both undergraduates and postgraduates with 1,270 and 1,240 enrolments in 2021/22 respectively. The next most popular choices for German undergraduates were social sciences (795), language and area studies (700), combined and general studies (690) and design, and creative and performing arts (660). The top two subject choices at the postgraduate level are the same as those at the undergraduate level, followed by engineering and technology, computing, and historical, philosophical, and religious studies. Over the last five years, there has been a large degree of consistency in terms of the top subject choices for both undergraduates and postgraduates, with business and management and social sciences remaining the top two subject choices for both throughout.

The share of German students enrolled at Russell Group (RG) universities has been on an upward trajectory since HESA records began in 2002/03. Specifically, the share of German students at RG universities stood at 33 per cent in 2002/03, rising to 38 per cent by 2012/13 and further to approximately 47 per cent in 2021/22. This means that almost half of all German international students choose to study at RG institutions when coming to the UK, highlighting the importance of institutional reputations in their decision-making process.

Historically, London has been the most popular study region within the UK for German students, accounting for around 28 per cent of total UK enrolments in 2021/22. The next most popular region for inbound German students in 2021/22 was Scotland (20 per cent), the South East (14 per cent) and the South West (6 per cent). At institutional level, the University of Oxford was the most popular choice for German students in 2021/22 with 780 enrolments. The next most popular were the University of Edinburgh (565), the University of Cambridge (510) and King's College London (485).

Figure 9: German HE enrolments in the US



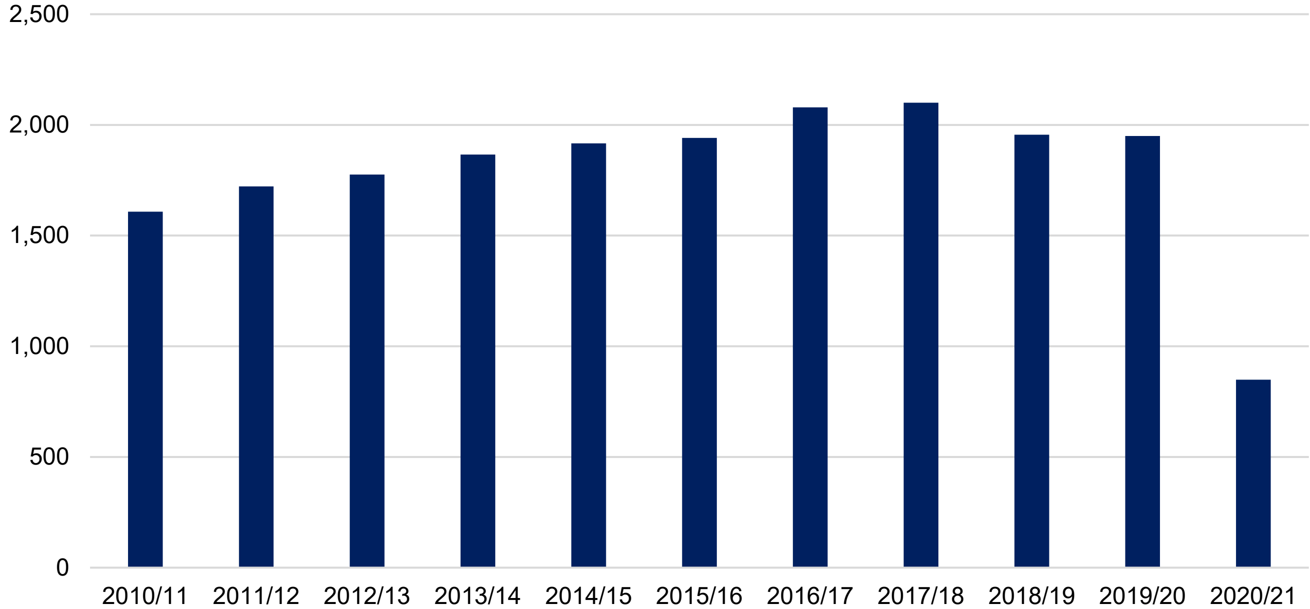
Source: IIE (Note: OPT students excluded).

Although less popular than the UK and some other continental European destinations, the US remains a leading destination for German students choosing to study internationally, hosting more than 8,000 students each year in the decade prior to the pandemic. However, in the 2020/21 academic year, German international student enrolments in the US fell by 44 per cent, down to just over 4,700, as strict Covid-19 travel restrictions disrupted student mobility. Enrolments recovered substantially in 2021/22, growing 67 per cent to 7,870, but remain around 7 per cent below pre-Covid levels.

A number of exchange programmes exist for German students seeking to study in the US, facilitated by groups including the German Academic Exchange Service (DAAD), the German Research Association (DFG), and the Fulbright Foundation.[27] While cooperation between the US and Germany in the area of education follows a decentralised structure, often carried out independently by organisations and institutions, the renewal of the US-Germany Science and Technology Agreement in 2020 aims to promote ongoing collaboration between universities in Germany and the US in research of areas such as AI, quantum technologies and the bioeconomy.[28]

[27] Bilateral cooperation with the United States, *German Missions in the United States,* 2023, www.germany.info/us-en/welcome/language-study-research/cooperation/1306106
[28] Joint statement on German-US Science and Technology Cooperation, *US Department of State,* 2020, www.state.gov/joint-statement-on-german-u-s-science-and-technology-cooperation/

Figure 10: German HE enrolments in Canada

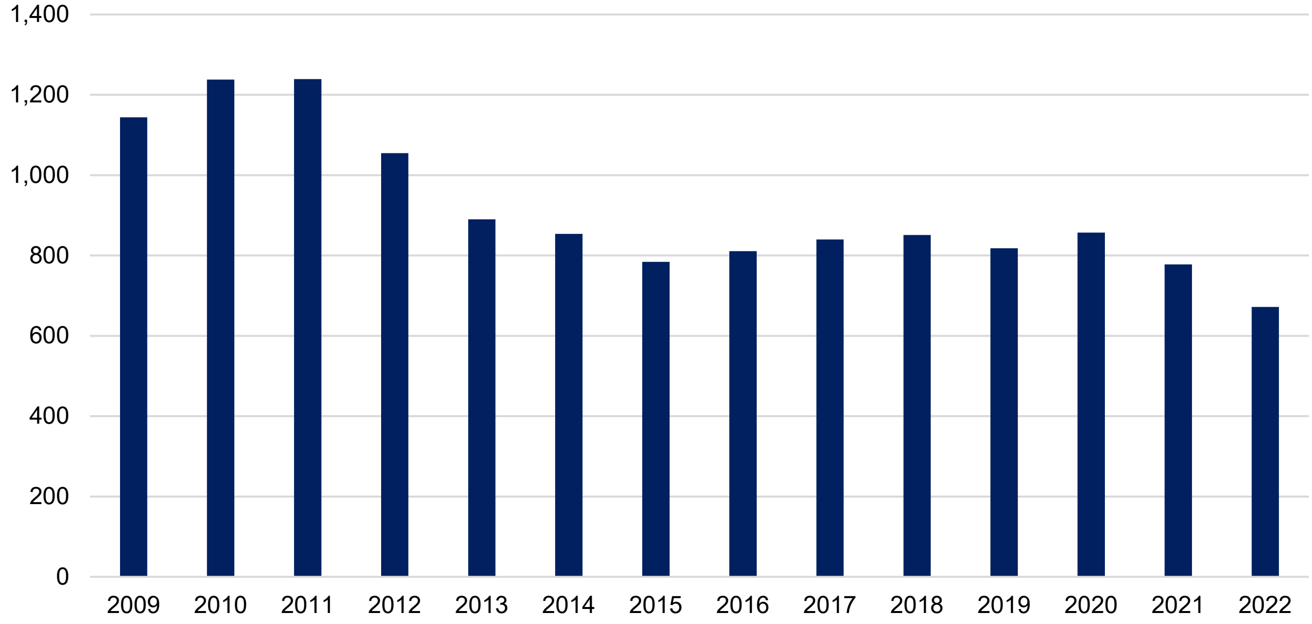


Source: StatCan

Despite seeing encouraging growth trends over much of the last decade, Canada remains a relatively small destination for German international students, hosting around 1,500-2,000 students each year for much of the last decade. In the 2020/21 academic year, the Covid-19 pandemic and associated travel restrictions led to a 56 per cent decline in German international student enrolments. However, recovery is expected in the years ahead, with the Canadian government having made concerted efforts to attract international student inflows over recent years, committing almost CA$150m over five years under the current International Education Strategy (2019-2024).[29] Canada also has a relatively accommodative visa environment which enables students to work alongside their studies, improving their exposure to the world of work and making their stay more affordable.

[29] Building on Success: International Education Strategy (2019-2024), *Government of Canada,* 2019, www.international.gc.ca/education/strategy-2019-2024-strategie.aspx?lang=eng

Figure 11: German HE enrolments in Australia



Source: AusTrade

Australia is also a relatively small destination market for German international students, with less than 1,000 students hosted each year since 2013, with the UK and the US the preferred English-speaking destination choices for German outbound international students.

From an inbound perspective, Germany is one of the world's leading host markets for international students, welcoming 441,000 international students in 2022. China is the leading origin country, with around 40,000 students studying in Germany in 2022. India comes next with almost 34,000 students, followed by Syria (16,700), Austria (14,600) and Turkey (12,600). Engineering is the most popular course for international students in Germany (145,700), followed by law, economics and social sciences (87,400).[30] One of the major draws for studying in Germany is its tuition-free universities and favourable visa policies for finding employment after graduation. The country is also known for its scientific research and science programmes and is considered a global leader in these areas.

In 2022, the German government established Academic Evaluation Centres (APS) in its top source markets of China and India, aimed at streamlining the visa application procedure and the verification of academic credentials, making it easier for international students in these countries to apply for courses in Germany.[31] Furthermore, in order to address the relatively high dropout rates of international students compared to German nationals, in a 2023 policy paper the DAAD

[30] Germany international student statistics, *Erudera*, 2023, www.erudera.com/statistics/germany/germany-international-student-statistics/
[31] Germany to streamline visa process with an APS system to speed up the admission process, *Leverage Edu,* 2022, www.leverageedu.com/blog/germany-to-streamline-visa-process-with-an-aps-system-to-speed-up-the-admission-process-news-2022-12/

called for an expansion in the number of English-taught courses, accompanied by additional German language courses.[32]

5.2 Transnational education and distance learning

In the 2021/22 academic year, there were 12,565 German students enrolled on UK TNE and distance learning courses, with a broadly even balance between undergraduate and postgraduate provision. This makes Germany the UK's second largest TNE and distance learning market in Europe, only behind Greece (22,400) and well ahead of Spain (4,900), France (3,000) and the Netherlands (2,300). Contributing to this has been the fast-paced growth in Germany of late, with the number of German students enrolled on UK TNE and distance learning courses roughly doubling over the last five years. In 2021/22, the most popular means of provision was via distance learning programmes, which accounted for around one third of the total. At institution level, Arden University registered the largest number of German TNE and distance learning students (2,450), followed by Middlesex University (1,785) and the Open University (900).

In 2019, the University of Lancaster opened a Leipzig campus, the first public UK university to establish a branch campus in Germany. The campus offers degrees in a range of subject areas including business and management, computing and IT and logistics and supply chain management. As such, the UK has made significant inroads into the TNE and distance learning market in Germany over recent years. However, varying regulations between states make it a difficult market to navigate for UK HEIs.

[32] Peak body calls for strategy to double Germany's retention of international students by 2030, *ICEF Monitor*, 2023, www.monitor.icef.com/2023/03/peak-body-calls-for-strategy-to-double-germanys-retention-of-international-students-by-2030/

6 UK Cooperation

The DAAD promotes academic exchange and cooperation between Germany and other countries, including the UK. In 2021, DAAD launched the 'German-UK Connections' initiative in collaboration with Universities UK International which receives funding from the UK Department for Education. This programme facilitates academic exchange between universities focusing on key areas of STEM, social sciences, arts and humanities and interdisciplinary studies.

In the area of student mobility, the UK's exit from the EU and subsequent decision to withdraw from its participation in the Erasmus+ scheme came as a blow to student bilateral flows between the UK and Germany. However, as a replacement to Erasmus, the UK began inviting applications for the Turing scheme in 2021, which will enable UK students to study in other countries around the world, including Germany. The new scheme will provide funding towards placements and exchanges of students and is open not only to university students but also those in vocational training, apprentices or those who are retraining through a college or school. In 2022, Germany was the fourth most popular higher education study destination for UK students funded under the Turing scheme, behind the US, Spain and France.

Although there has been relatively little in the way of government-to-government cooperation initiatives since the UK left the EU, there remains a greater degree of cooperation and strategic partnership at university level between the two countries. Among many other examples, the Oxford–Berlin Research Partnership is a strategic research partnership, formed in 2017, between Oxford and the four universities making up the Berlin University Alliance: Freie Universität Berlin, Humboldt-Universität zu Berlin, Technische Universität Berlin and the Charité – Universitätsmedizin Berlin. It aims to support high quality joint research initiatives across all disciplines of the member institutions, funded by collaborative applications to the EU framework programmes as well as from other funders and charitable agencies.[33]

The Russell Group and the German U15 – a similar group representing 15 research-intensive universities – have established an agreement to enhance and protect cross-border collaboration by setting up a joint committee to look at new ways of working together, alongside other efforts to support partnerships between their member universities and to work together on specific issues such as free speech, academic freedom, and Horizon Europe membership.

In the research field, the German Research Foundation (DFG) is a strong partner of UK Research and Innovation (UKRI), as the two countries are both research powerhouses in Europe. The two organisations signed a Memorandum of Understanding in July 2023 as well as reaffirming that they would continue to tackle global challenges together in the future.[34] The UK's recent re-entry to the multilateral Horizon Europe research partnership will also open further opportunities for cooperation between UK and German institutions.

[33] The Oxford-Berlin Research Partnership, *University of Oxford*, 2023, www.ox.ac.uk/about/international-oxford/oxford-berlin-research-partnership
[34] DFG President Signs Agreement with UK Research and Innovation in London, *DFG*, 2023 https://www.dfg.de/en/service/press/press_releases/2023/press_release_no_33/index.html