BRITISH COUNCIL | Education Intelligence

Postgraduate student mobility trends to 2024

October 2014

Contents

Executive summary

Premise

This report focuses on postgraduate mobility and builds upon the forecasts of two British Council forecasting reports, *The shape of things to come: Higher education global trends and emerging opportunities to 2020* and *The future of the world's mobile students to 2024*. This research forecasts key drivers of student mobility and postgraduate student flows to 2024 and includes analysis of the largest inbound and outbound growth markets of the next decade.

Data coverage

For this research, 23 outbound markets as well as six inbound markets were selected for analysis based on significance in the international higher education market, their tertiary and postgraduate market size (current and potential) and data availability. Forecasts of student mobility took into account demographic and economic data for each market, as well as historical trends and bilateral trade patterns; forecasts are based upon these indicators, for which there is data available, and do not take into account other variables that may affect international student mobility in the future.

Key forecasts

- In 2024, India will be home to the largest tertiary-aged population, numbering over 119 million
- China will become home to the second-largest tertiary-aged population, decreasing 30 million from 2012 to equal 79 million in 2024
- India will have the highest number of tertiary enrolments in 2024, numbering 48 million, followed by China (37 million), the US (22 million), and Indonesia (11 million)
- The strongest annual average growth in outbound postgraduate mobility will occur in Nigeria (+8.3%), followed by India (+7.5%), Indonesia (+7.2%), Pakistan (+6.4%) and Saudi Arabia (+5.2%)
- India postgraduate outbound mobility will have a higher annual average growth rate through the next decade than China
- China will be the largest source of international postgraduate students in 2024, with total outbound postgraduates to selected markets numbering 338,000, compared to India's 209,000
- To 2024, the US will remain the number one inbound postgraduate destination, hosting 407,000 postgraduates, followed the by the UK, which will host 241,000, Germany (113,000 inbound postgraduates) and Australia (112,000 inbound postgraduates)
- Australia and Canada are forecast to have the highest annual average growth in inbound postgraduate mobility, at 4.1 per cent each
- The US inbound postgraduate market is predicted to grow at four per cent annual average change
- The UK and Japan are expected to see slowed growth, at 3.5 per cent and 1.6 per cent respectively
- In 2024, China is expected to account for 44 per cent of growth in inbound postgraduates to the UK and India is expected to account for 54 per cent of the US' growth in inbound postgraduates
- Postgraduate bilateral flows from China and India to leading destination countries will remain the largest through 2024

Introduction

As economies across the globe are becoming increasingly more integrated the need for an education that meets the needs of a competitive, quickly-changing marketplace has intensified. As a result there has been substantive growth in undergraduate enrolments, which has followed the growth of 'emerging' economies most prominently in Asia. The experience of students who have studied abroad feeds back into both globalisation and economic development, whether university graduates ultimately return to their home countries or migrate to form part of the skilled workforce in the countries in which they studied, or even elsewhere.

However, there has been a recent trend towards attaining even more advanced qualifications, a movement fuelled not only by individuals eager for better employment opportunities but by governments aiming to create more highly-competent workforces. At the same time, universities need to attract talented students at the postgraduate level for a number of reasons, including the growing importance of research output in determining funding and positioning in international university rankings. The talent pool is increasingly seen as an international one in which ranked universities across the world are competing for the best students. In the majority of the eight leading countries that were studied for a recent Higher Education Funding Council for England (HEFCE) report[1], around a third of all higher education awards are postgraduate, ranging from a low of 24.7 per cent in Spain to a high of 37.1 per cent in Scotland. The percentage of postgraduate research (PGR) to total postgraduate awards was much more varied, ranging from 8.6 per cent in Australia to 31.4 per cent in Germany.

Drivers of international higher education

Economic and demographic data provide the best foundation upon which to base analysis and how these two drivers merge can often indicate the direction of international higher education's future growth. However, with the natural unpredictability of human interaction, no mathematical formula can account for all circumstances and possibilities; other considerations come into play that will affect a population's capacity to fund overseas education. These drivers were discussed in greater detail in relation to student mobility in a previous British Council report, *Megatrends: The future of international education*.

It is additionally important to note that underpinning the growth of postgraduate students is the 'massification' of higher education, in which higher education is being made more available to a wider population. This increased access initially prompted the growth in undergraduate degrees and now is helping propel a wave of students seeking additional qualifications beyond the first degree. A growing middle class, the aspiration of students eager for prosperity, and demand for more advanced skills and knowledge in the workplace have all combined to make the mobility of postgraduate students a phenomenon worth examining. Ultimately, however, demographic and economic data remain the most certain predictors of undergraduate and postgraduate enrolments through the next decade.

Report structure

The report has seven sections:

1. **Methodology** presents the methodology developed and used in the forecasting framework for the research
2. **Drivers of international higher education** reviews the drivers for future growth in international higher education, specifically the impact of demographic and economic trends on global demand

[1] *International comparisons in postgraduate education: quality, access and employment outcomes. Report to HEFCE by Gillian Clarke and Ingrid Lunt, University of Oxford, September 2014.*

3. **Growth in tertiary enrolments** presents the recent trends and projected future in domestic tertiary enrolments for selected origin countries and territories
4. **Outbound postgraduate student mobility** introduces the current landscape and forecasts for outbound postgraduate student mobility to 2024
5. **Inbound postgraduate student mobility** reviews recent trends and projects future postgraduate flows into selected inbound markets
6. **Bilateral postgraduate student mobility** presents the major current and forecasted bilateral postgraduate flows to 2024
7. **Key findings** reviews the research and presents conclusions from the data

Methodology

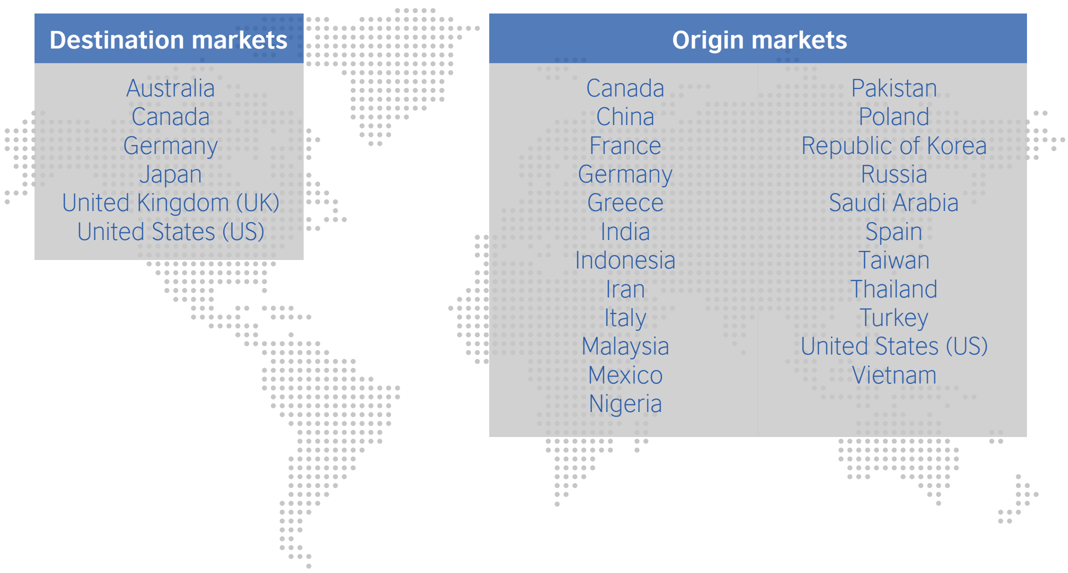
The British Council carried out this research with Oxford Economics from June to September, 2014.

Forecasting model overview

Drawing from experience gained from previous student mobility forecasting work, including *The shape of things to come: Higher education global trends and emerging opportunities to 2020* and *The future of the world's mobile students to 2024*, a bespoke model was constructed to forecast international postgraduate student mobility flows between countries and territories of interest.

The model incorporates the latest available demographic, education and economic data and provides forecast bilateral postgraduate student flows to 2024 between six destination markets and 23 origin markets, listed below. This list of both destination and origin markets was formed by analysis of markets of interest as well as the potential fastest-growing origin and destination markets over the next decade; data availability also contributed to the decision-making process. The British Council recognises that domestic postgraduate enrolments (alongside international postgraduate enrolments) are increasing in many countries and territories, and exclusion of a country from this study does not mean that there is no potential for growth.

Model market coverage



Source: British Council

Definitions and scope of research

The model produces forecasts using the international student definition as opposed to the foreign student definition. International students are defined as students moving to another country for the express purpose of study versus foreign students who are defined as non-citizens of the country in which they are studying so may be permanent residents of the country in which they are studying. For the purposes of analysing student mobility, the international student definition is more appropriate as not all foreign students are necessarily mobile students.

As widely discussed[2] within the international higher education sector, there are issues with regards to the comparability of student mobility data across countries and territories. The agencies responsible for student mobility data collection within different countries and territories often use slightly different definitions when classifying international students and, in some cases, apply different methodologies when recording the origin country of students. While best efforts have been made to make all data sources comparable within this research, a degree of caution should be exercised when comparing volumes of inbound student numbers across the six destination markets.

Outbound postgraduate student flows from each of the 23 origin markets refer to postgraduate student flows into the six destination markets of interest in this study. Therefore, students moving from origin markets of interest to other destination markets (outside the destination markets covered in this research) are not captured within the scope of this research. Similarly, inbound student flows to the destination markets of interest represent student flows from the 23 origin markets of interest in this study and do not include inbound students coming from other origin markets of interest. Moreover, the growth or contraction of inbound and outbound markets not selected for this research is outside the scope of this research. Therefore, outbound and inbound student "totals" from this research should be interpreted with this in mind.

Tertiary enrolment rate and total tertiary enrolment projections

Total tertiary enrolments, inclusive of postgraduate enrolments, within a country are equal to the tertiary-aged population multiplied by the tertiary enrolment rate. The UN Population Division's populations by age projections were used to determine the size of the tertiary-aged population within each country of interest. Tertiary enrolment rates have historically shown strong correlation with GDP per capita (PPP exchange rate, real, US$) and that relationship, along with historic trends, is used to forecast each country's tertiary enrolment rate to 2024. The UN population projections and the tertiary enrolment rate forecast are then combined to forecast the number of tertiary enrolments in each country of interest to 2024.

The forecast period is from 2013 to 2024 inclusive. At the time of publication, 2012 is the latest year of data for most countries published by UNESCO with relation to tertiary enrolment rates and levels.

Forecasting tertiary enrolments

Source: Oxford Economics, British Council

[2] http://www.universityworldnews.com/article.php?story=20140130155355392

Outbound mobile postgraduate projections

The outbound mobility ratio reflects how likely students are to pursue their education abroad; in other words this ratio captures internationally mobile students coming from a country as a percentage of all tertiary students in that "sending" or "origin" country. Data were collected from national sources on the number of postgraduate international students studying in the six destination markets of interest from the 23 origin markets of interest. For each origin market, the number of international students studying in the six destination markets was added together and divided by total tertiary enrolments in order to calculate an implied outbound postgraduate mobility ratio. This ratio reflects how likely students from each of the origin markets are to pursue postgraduate education in the six destination markets of interest. It is important to note that for some of the shortlisted countries and territories information on mobile tertiary student flows is not well recorded and this lack of data may limit the forecasting of mobile tertiary students in certain countries and territories.

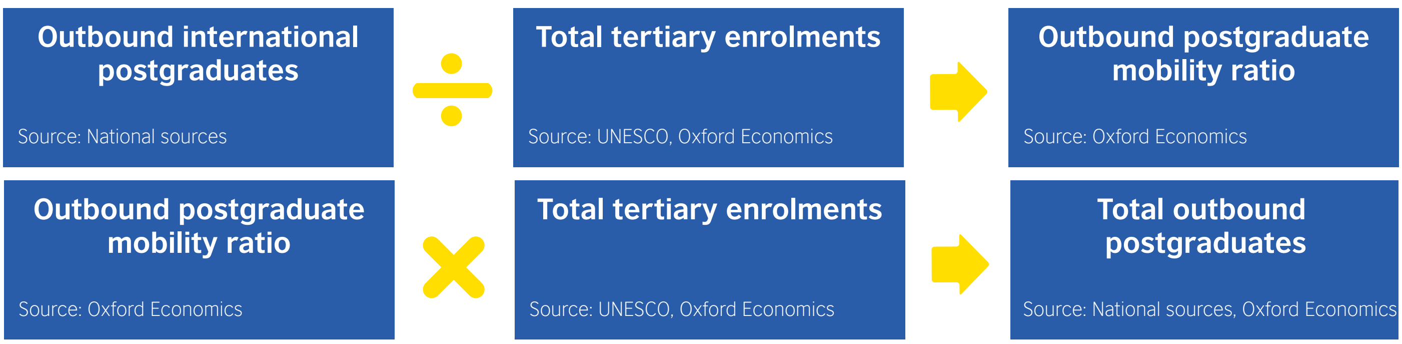
The outbound postgraduate mobility ratio for each origin country was then forecast to 2024 using historic trends and its relationship with two key drivers:

- Local currency: the strength or weakness of an origin market's local currency affects the cost of studying abroad. That is, if a country's currency depreciates in value, international study becomes more expensive (in local currency terms) and therefore less affordable to students. By contrast, if a country's currency appreciates in value, international study becomes less expensive (in local currency terms), and so more affordable and appealing to students.
- Ratio of households with income greater than US$35,000 (constant prices) to total tertiary enrolments: affordability and household incomes are an important determinant of the demand for international study. Analysis by Oxford Economics has shown that the ratio of households with income greater than US$35,000 (constant prices) to total tertiary enrolments is positively correlated with the outbound mobility ratio.

The forecast outbound postgraduate mobility ratio for each origin country is then applied to the forecast total tertiary enrolments in order to generate the forecast total number of postgraduate outbound international students from each origin country studying in the six destination markets of interest.

The forecast period is from 2013 to 2024 inclusive. At the time of publication, 2012 is the latest year of data for most countries published by UNESCO with relation to tertiary enrolment rates and levels.

Forecasting total outbound postgraduate students



Source: Oxford Economics, British Council

Inbound mobile postgraduate projections

Whereas the outbound mobile student forecasts are based on tertiary enrolments within a single country and its outbound mobility ratio, inbound mobile student forecasts essentially require the summation of outbound mobile student flows from all origin markets to the particular destination market in question. In other words, the change in inbound mobile student flows for destination markets is driven by the volume of outbound mobile students from key origin markets and the destination patterns of students from these origin markets. For some of the shortlisted countries and territories, information on inbound mobile tertiary student flows is not well recorded and this issue may limit the forecasting of inbound mobile tertiary students in certain countries and territories.

It has nonetheless been possible to produce inbound tertiary student forecasts for the six selected markets. While the flows include shortlisted countries and territories only, in many cases this covers a sufficiently high share of origin markets to be representative of future flows. Origin market destinations are forecast on the basis of current patterns and trends, plus forecast trends in bilateral trade.

Bilateral student flow projections

To forecast bilateral student flows, the forecast total number of outbound international postgraduate students from each origin country studying in the six destination markets of interest is then distributed amongst the six destination markets of interest according to historic trends in destination patterns and the forecast nature of bilateral merchandise trade flows between the origin and destination markets, according to Oxford Economics' global trade model. Bilateral trade flows have historically been closely linked to bilateral student flows and so are key drivers of this aspect of the model. Bilateral services trade data are unavailable for many countries and territories and so only bilateral merchandise trade data are included in the model.

The forecast period is from 2013 to 2024 inclusive. At the time of publication, 2012 is the latest year of data for most countries published by UNESCO with relation to tertiary enrolment rates and levels.

Forecasting bilateral postgraduate student flows

Source: Oxford Economics, British Council

Drivers of international higher education

Demographics and economics are among the most influential factors shaping the landscape of international higher education through the next decade. Both these drivers serve as a base when forecasting student mobility as they are relatively easy to quantify and forecast.

Demographics

Demographic drivers, specifically tertiary-aged populations, will drive the higher education market by directly affecting recruitment, enrolments and mobility. There is a clear positive correlation between the number of 18 to 22 year olds and the number of tertiary enrolments, inclusive of postgraduate enrolments, in a country.

Tertiary-aged population growth (2013-24)

TERTIARY AGE POPULATION GROWTH				
Country	18-22 population (000s) 2013	18-22 population (000s) 2024	Change (000s) 2013-24	Change (% annual ave.) 2013-24
India	115,962	119,547	3,585	0.3%
China	109,437	79,504	-29,933	-2.9%
United States	22,233	22,183	-50	0.0%
Indonesia	20,691	23,936	3,244	1.3%
Pakistan	19,231	19,580	349	0.2%
Nigeria	16,143	22,487	6,344	3.1%
Mexico	11,142	11,418	276	0.2%
Russia	9,195	7,360	-1,835	-2.0%
Vietnam	8,568	6,787	-1,784	-2.1%
Iran	7,184	5,710	-1,474	-2.1%
Turkey	6,327	6,349	22	0.0%
Thailand	4,615	3,981	-634	-1.3%
Germany	4,454	3,755	-699	-1.5%
France	3,956	4,037	81	0.2%
Republic of Korea	3,370	2,485	-886	-2.7%
Italy	3,046	3,002	-44	-0.1%
Malaysia	2,869	2,654	-214	-0.7%
Poland	2,463	1,821	-643	2.7%
Saudi Arabia	2,383	2,532	149	0.6%
Canada	2,285	2,158	-126	-0.5%
Spain	2,265	2,435	170	0.7%
Taiwan	1,613	1,106	-507	-3.4%
Greece	558	553	-6	-0.1%

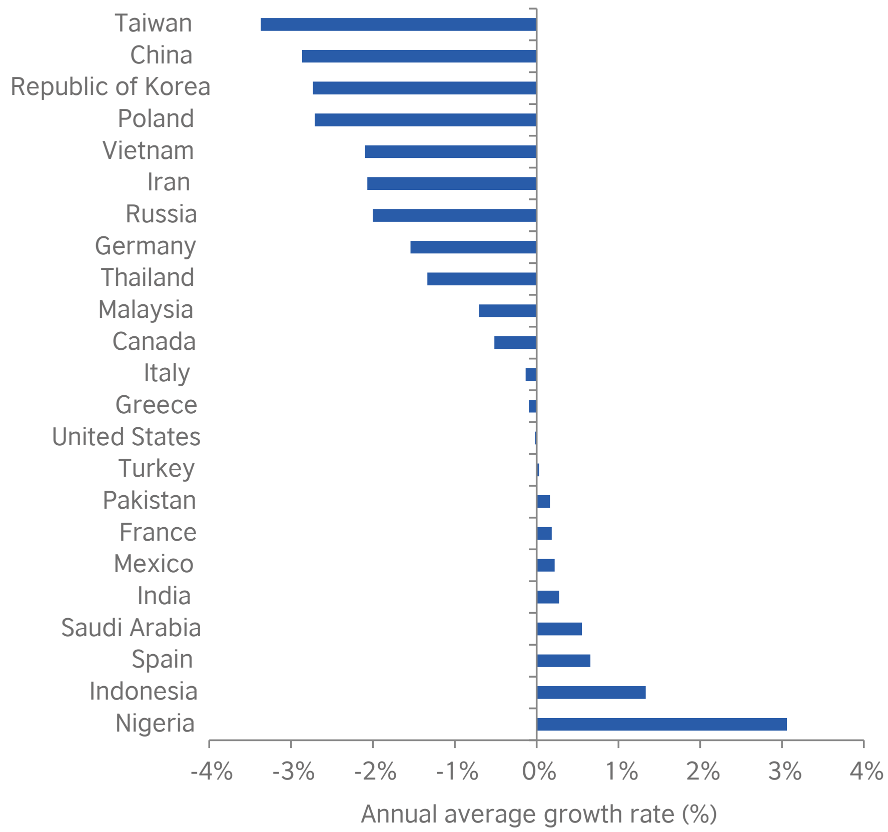
Source: UN Population Division, British Council

Of the 23 origin countries and territories examined in this research, India houses the biggest 18 to 22 year old population, closely followed by China, home to 109,437,000 tertiary-aged people. The United States, Indonesia, Pakistan and Nigeria also have sizable youth populations.

More than half (14) of the 23 origin countries and territories are expected to experience declines in their tertiary-aged (18-22) populations over the next decade. By far the most striking demographic swing is expected to be in China. The UN Population Division predicts that there will be approximately 30 million fewer 18 to 22 year olds in China in 2024 as compared to 2013, a 2.9 per cent annual average decrease. Other countries with declining tertiary-aged populations include Russia (-1.8 million), Vietnam (-1.8 million) and Iran (-1.5 million).

By contrast, Indonesia (+3.2 million), India (+3.6 million) and in particular, Nigeria (+6.3 million), are expected to experience very strong tertiary-aged population growth over the next decade.

Tertiary-aged population growth (2013-24)



Source: UN Population Division, British Council

With regards to rate of population growth, Nigeria (+3.1%), Indonesia (+1.3%), Spain (+0.7%), Saudi Arabia (+0.6%) and India (+0.3%) are expected to experience the strongest annual average growth in their tertiary-aged populations over the next decade. Conversely, Asian economies including Taiwan (-3.4%), China (-2.9%) the Republic of Korea (-2.7%) and Vietnam (-2.1%) are expected to experience the largest annual average contractions in their tertiary-aged populations over the next decade. The 18 to 22 year old populations in Poland (-2.7%), Iran (-2.1%) and Russia (-2%) are also set to decline.

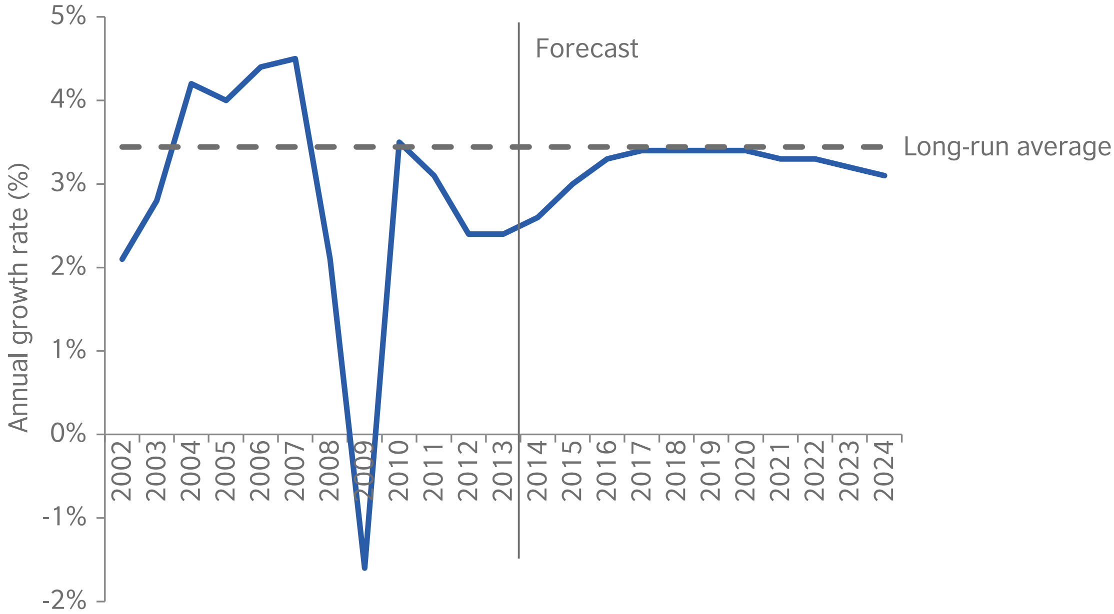
These important demographic trends will be key drivers of forecasts in this report and in determining future trends within the international higher education sector globally.

Economics

There are a number of economic factors that drive international student mobility, including economic growth, economic wealth and household incomes as well as other macroeconomic variables such as the exchange rate, mostly relevant for inbound student mobility.

The global economy is gradually normalising

World GDP growth (2002-24)

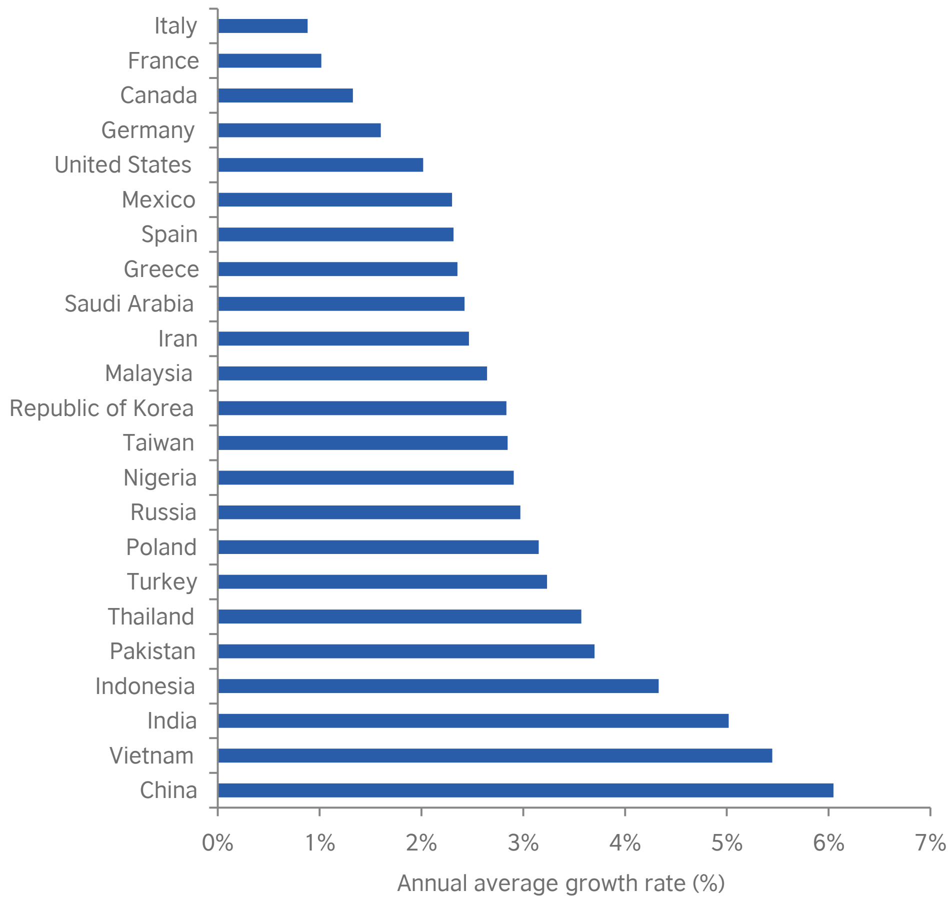


Source: Oxford Economics, British Council

The global GDP fell sharply during 2008 and 2009 as a consequence of the global financial crisis. However, since 2010, the world economy has returned to growth, albeit at below long-run average rates for the last three or four years due to the lingering weight of the Eurozone crisis and slowdown in the BRIC economies. From 2017, the world economy will return to long-run average growth rates, which will have a positive impact upon both tertiary enrolments and international student mobility.

GDP per capita expected to grow across all origin markets

GDP per capita growth (2013-24)



Source: Oxford Economics, British Council

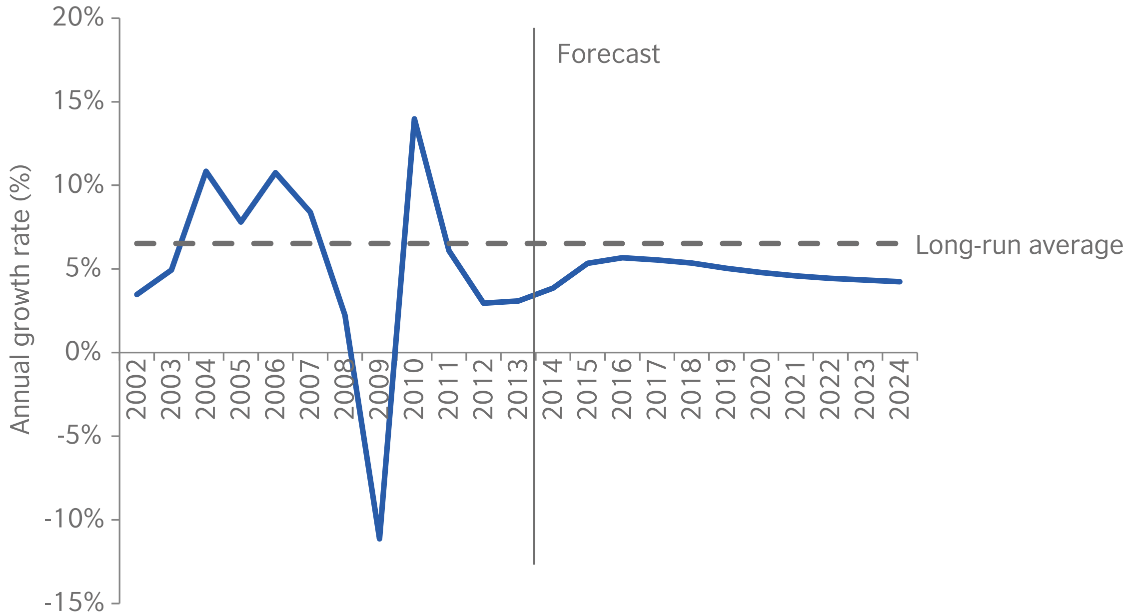
There is a strong positive relationship between GDP per capita, or household wealth, and tertiary enrolments. This relationship is particularly pronounced at household incomes of US$10,000 or less, wherein even small increases in wealth are correlated to substantial increases in gross tertiary enrolment ratios at the national level. While increases in GDP per capita above US$10,000 are also linked with increased tertiary enrolments, the relationship is slightly weaker.

GDP per capita is expected to rise across all 23 origin markets over the next decade. Asian economies including China (+6.0%), Vietnam (+5.4%), India (+5.0%), Indonesia (+4.3%) and Pakistan (+3.7%) are expected to experience the strongest annual average growth rates. It is anticipated that these strong rates of economic growth will drive significant growth in the tertiary enrolment rates within each of these countries and territories over the next decade.

Developed Western economies including Italy (+0.9%), France (+1.0%), Canada (+1.3%), Germany (+1.6%) and the United States (+2.0%) are also forecast to experience moderate growth in GDP per capita to 2024.

Global trade continuing to recover

World trade growth (2002-24)



Source: Oxford Economics, British Council

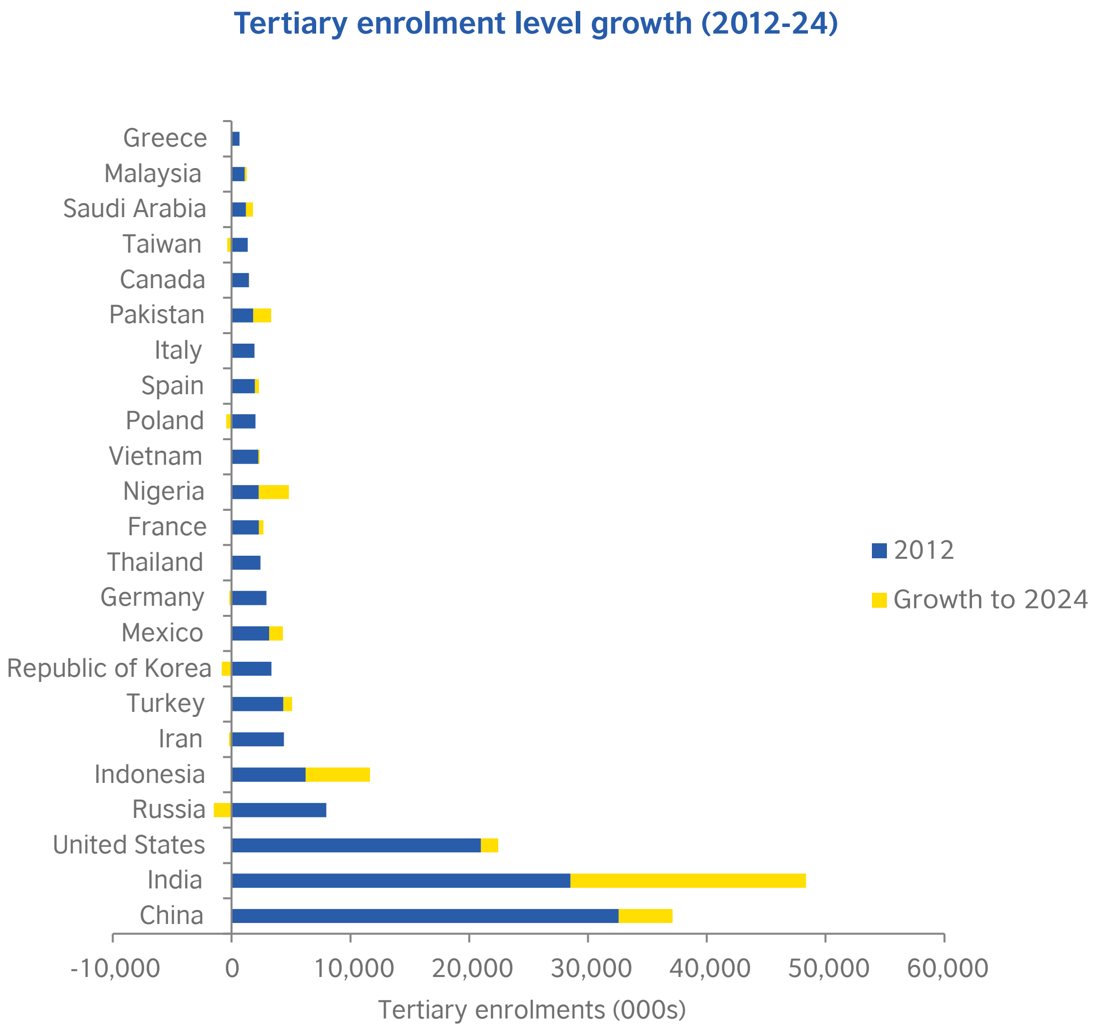
Global trade has been closely linked to global enrolments and mobile tertiary students. In fact, from the early 1990s to 2008, the three factors grew at a similar pace; the same way trade enhances market growth, student mobility is viewed as influencing economic growth and skilled productivity. While the exact causal relationship between global trade and enrolments is not directly examined in this research, the link exists at both the international and bilateral level.

In line with world GDP, global trade contracted sharply during 2008 and 2009 as a consequence of the global financial crisis and recession. Global trade rebounded strongly in 2010 before slowing down to positive yet below long-run average growth rates. This is a reflection of the ongoing challenging economic climate for many countries and territories. Over the next decade, global trade is expected to pick up until 2016, before slowing down gradually until 2024.

Growth in tertiary enrolments

Global tertiary enrolments reached 196 million in 2012, according to the UNESCO Institute for Statistics (UIS); this growing number of enrolments is the basis for growth in international student mobility.

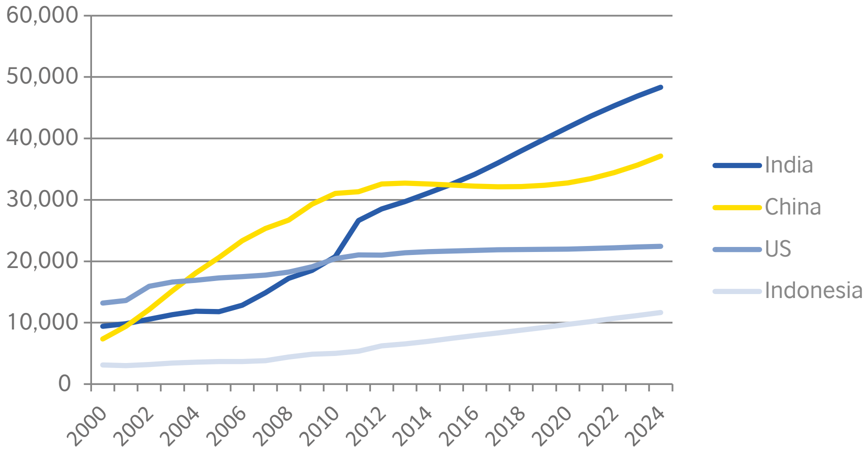
Forecasted tertiary enrolments to 2024



Source: UNESCO, Oxford Economics, British Council

In 2012, China had the highest number of tertiary enrolments, followed by India and the US. Due in part to slow economic and demographic growth, China will have the second highest number of tertiary enrolments by 2024; India will be home to the highest number of university students. The US will continue to occupy the number three position with Indonesia, nearly doubling its enrolments, home to the fourth highest tertiary enrolments.

Total tertiary enrolment growth (000s)



Source: Oxford Economics, British Council

Driven by strong projected demographics and growth in its tertiary enrolment rate, India is expected to have approximately 20 million more students enrolled in tertiary education by 2024 as compared to 2012. In fact, the projected growth in India alone is more than the projected growth in all other origin countries and territories with positive growth combined. Despite its weak demographics, strong growth is still also forecast for China (+4.5 million enrolments) as growth in its tertiary enrolment rate is expected to more than offset the decline in its tertiary-aged population.

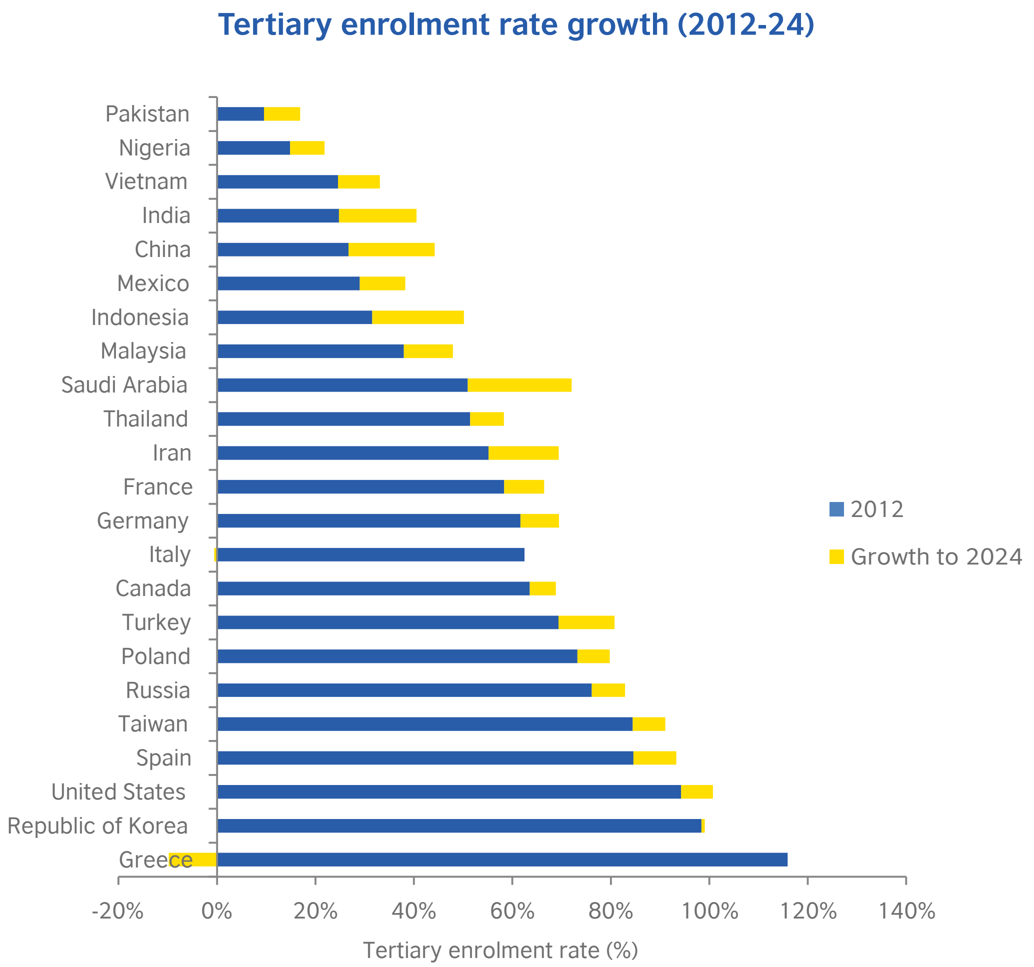
Growth in tertiary enrolments

Country	Total tertiary enrolments (000s) 2012	Total tertiary enrolments (000s) 2024	Change (000s) 2013-24
India	28,526	48,347	19,822
China	32,586	37,123	4,537
United States	20,994	22,440	1,445
Indonesia	6,234	11,638	5,404
Russia	7,983	6,483	-1,500
Turkey	4,354	5,093	740
Nigeria	2,292	4,821	2,529
Mexico	3,161	4,321	1,160
Iran	4,405	4,183	-221
Pakistan	1,817	3,324	1,507
Germany	2,939	2,734	-206
France	2,296	2,672	376
Republic of Korea	3,357	2,522	-835
Vietnam	2,261	2,363	102
Thailand	2,430	2,361	-70
Spain	1,966	2,294	328
Italy	1,926	1,878	-48
Saudi Arabia	1,206	1,796	590
Poland	2,007	1,559	-448
Canada	1,454	1,480	26
Malaysia	1,096	1,279	183
Taiwan	1,355	1,001	-355
Greece	660	591	-70

Source: British Council

Alongside India and China, Indonesia (+5.4 million), Nigeria (+2.5 million), Pakistan (+1.5 million) and the US (+1.4 million) are expected to experience strong growth in tertiary enrolment levels. Despite experiencing growth in their tertiary enrolment rates, Russia, Iran, Germany, South Korea, Thailand, Italy, Poland and Taiwan are forecast to experience declines in tertiary enrolment levels due to weak demographic projections.

Tertiary enrolment rate growth



Source: UNESCO, Oxford Economics, British Council

All countries and territories, with the exception of Greece, are forecast to experience growth in their tertiary enrolment rates during the forecast period, with Saudi Arabia (+21 percentage points), Indonesia (+19 pp), China (+18 pp), India (+16 pp) and Iran (+14 pp) expected to be among the fastest growing.

As of 2012, Greece had the highest tertiary enrolment rate (116%) of the 23 origin countries and territories. Tertiary enrolment rates can be greater than 100 per cent due to entry into tertiary education of those older or younger than traditional tertiary age. According to UNESCO, the rate increased sharply from 103% in 2009 to 116% in 2012. This is likely to be a short-term consequence of the ongoing economic and youth unemployment issues within the country. While Greece will still have the highest tertiary enrolment rate of the 23 countries and territories, it will have normalised by 2024 to 106%.

Outbound postgraduate student mobility

UNESCO estimates that there were over four million internationally mobile students in 2012, up from two million in 2000. The propensity to study abroad has been shown to be, on average, around two per cent of a nation's tertiary enrolments. This propensity, termed the 'leakage rate', plays a part in understanding how students will continue to study abroad and if past trends translate to future ones.

Recent outbound postgraduate trends

Outbound postgraduate flows to selected destinations (2007-12)

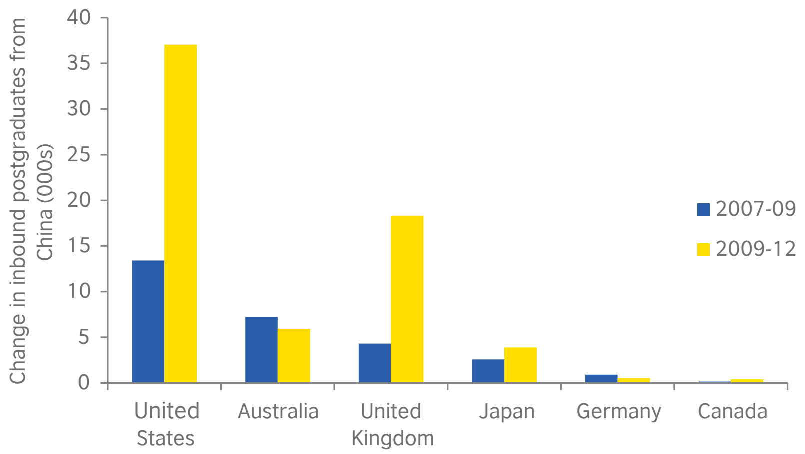
OUTBOUND POSTGRADUATES TO SELECTED DESTINATION MARKETS				
Country	Outbound postgraduates (000s) 2007	Outbound postgraduates (000s) 2012	Change (000s) 2007-12	Change (% annual ave.) 2007-12
China	132	227	95	11.4%
India	112	88	-25	-4.8%
Republic of Korea	35	30	-6	-3.4%
Saudi Arabia	6	19	13	25.3%
United States	16	19	2	2.9%
Taiwan	26	19	-8	-6.8%
Canada	20	18	-2	-2.4%
Iran	8	17	10	18.0%
France	15	16	2	2.2%
Nigeria	11	15	5	7.4%
Turkey	13	13	0	0.1%
Germany	12	13	1	2.4%
Thailand	14	12	-1	-2.0%
Italy	9	12	3	5.6%
Vietnam	6	11	5	12.7%
Pakistan	11	11	0	0.0%
Russia	10	11	1	1.0%
Malaysia	10	10	1	1.6%
Greece	12	10	-2	-3.5%
Spain	7	9	2	5.8%
Indonesia	8	9	1	3.4%
Mexico	8	8	1	1.6%
Poland	10	7	-3	-7.2%

Source: National sources, British Council

Saudi Arabia, Iran, Vietnam and China experienced the greatest percent annual average change in outbound postgraduate mobility to the six selected destinations from 2007 to 2012. Several other countries and territories (Republic of Korea, Taiwan, Canada, Thailand, Greece and Poland) experienced small declines in the number of outbound postgraduate students studying in the six destination markets covered in this research. However, these declines are closely correlated with recent demographic trends. It is interesting to note the recent diverging trends in

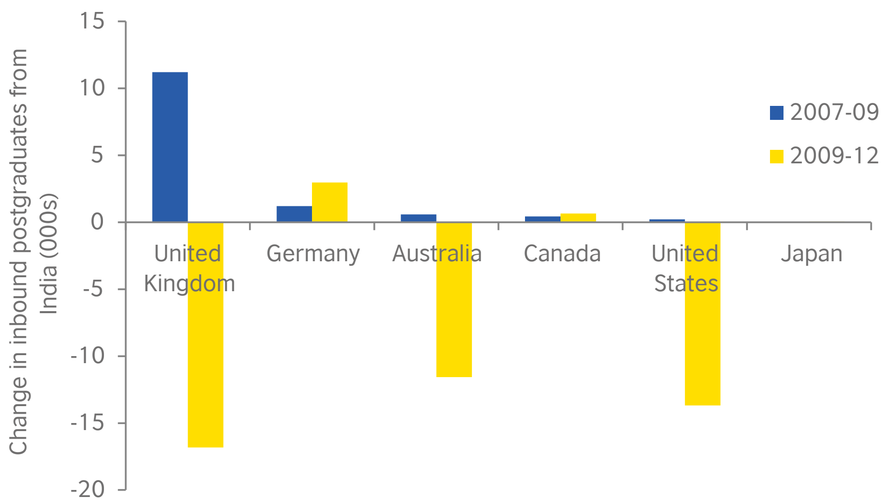
China and India, the two biggest international education markets.

Change in postgraduate student flows from China to selected destinations



Sources: National sources, British Council

Change in postgraduate student flows from India to selected destinations



Source: National sources, British Council

Over the last five years, China has been the largest source of international postgraduates to the six destination markets covered in this research. In 2007, there were 132,000 outbound Chinese postgraduates, which rose to 227,000 by 2012. This translates to a strong annual average growth rate of 11.4%.

India experienced a decline of 25,000 outbound postgraduates between 2007 and 2012 to the six countries selected for this study. Indeed, after a period of growth to 2009, the number of Indian international postgraduates studying in the United States, Australia and in particular, the United Kingdom has declined. Despite this, India remained the second largest source of international postgraduates as of 2012.

Forecasted outbound postgraduate flows to 2024

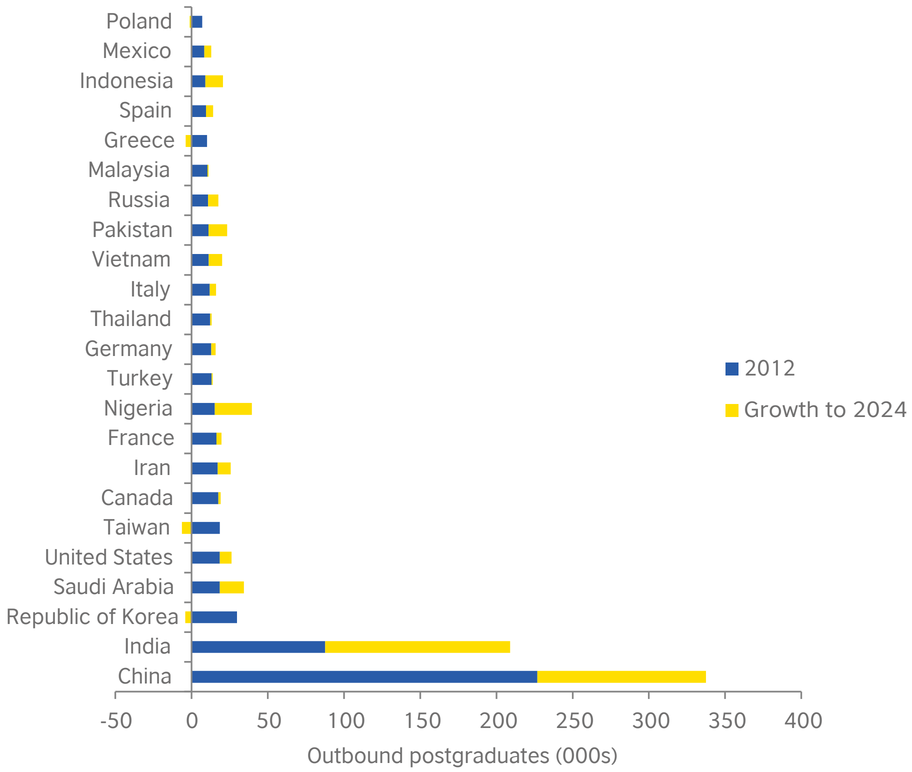
Outbound postgraduate flows to selected destinations (2012-24)

OUTBOUND POSTGRADUATES TO SELECTED DESTINATION MARKETS				
Country	Outbound postgraduates (000s) 2012	Outbound postgraduates (000s) 2024	Change (000s) 2012-24	Change (% annual ave.) 2012-24
China	227	338	111	3.4%
India	88	209	121	7.5%
Nigeria	15	40	24	8.3%
Saudi Arabia	19	34	16	5.2%
United States	19	26	8	2.9%
Iran	17	26	8	3.4%
Republic of Korea	30	26	-4	-1.2%
Pakistan	11	23	12	6.4%
Indonesia	9	21	12	7.2%
Vietnam	11	20	9	4.9%
France	16	20	3	1.5%
Canada	18	19	1	0.7%
Russia	11	18	7	4.1%
Italy	12	16	4	2.5%
Germany	13	16	3	1.7%
Spain	9	14	5	3.4%
Turkey	13	14	1	0.4%
Thailand	12	13	1	0.6%
Mexico	8	13	5	3.7%
Taiwan	19	12	-6	-3.4%
Malaysia	10	11	1	0.5%
Greece	10	6	-4	-3.8%
Poland	7	6	-1	-1.7%

Source: National sources, Oxford Economics, British Council

The highest percent annual average change in postgraduate outbound mobility to the six selected destinations will occur in Nigeria (+8.3%), followed by India (+7.5%), Indonesia (+7.2%), Pakistan (+6.4%) and Saudi Arabia (+5.2%). Primarily driven by weak demographics, small declines in outbound postgraduates are expected in the Republic of Korea, Taiwan, Greece and Poland over the next decade.

Change in outbound postgraduates to selected markets (2012-24)

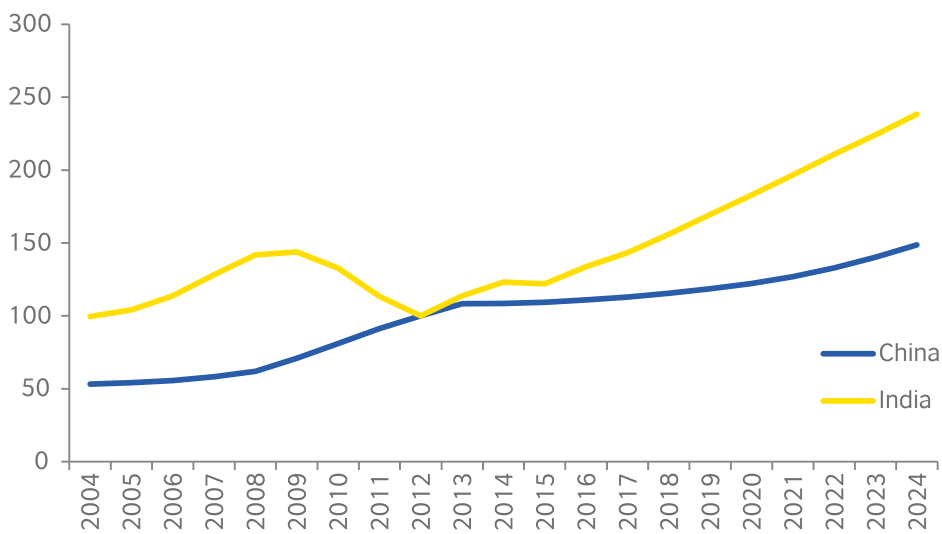


Source: National sources, Oxford Economics, British Council

China will remain the largest source of international postgraduate students by 2024, with a forecasted annual average growth of 3.4 per cent, and with total outbound postgraduates to the selected destination markets increasing to 338,000 in 2024 from 227,000 in 2012. In absolute terms, India is forecast to be the fastest growing source of international postgraduates, with the number of students expected to rise to 209,000 in 2024 from 88,000 in 2012.

Significant growth is also expected in several other origin markets, including Nigeria (+24,000), Saudi Arabia (+16,000), Indonesia (+12,000) and Pakistan (+12,000). Alongside India and China, these markets will present important opportunities for inbound growth for destination markets.

China & India outbound postgraduate growth index (2012 = 100)

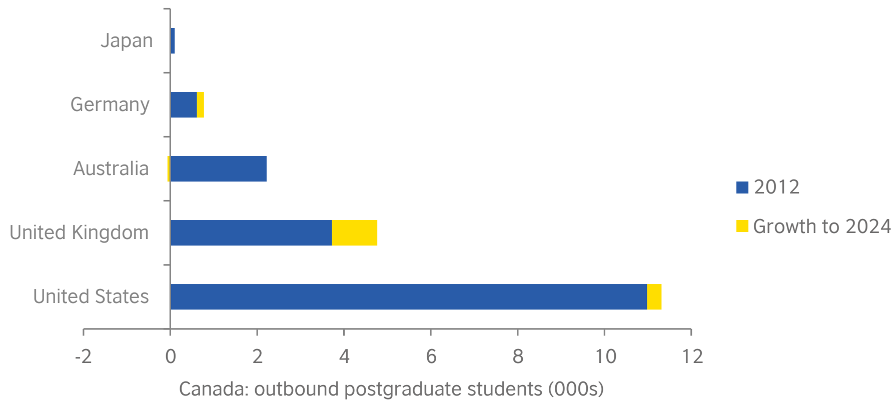


Source: National sources, Oxford Economics, British Council

Despite the fact that China will remain the largest postgraduate origin market to 2024, the high annual average growth in India will reduce the gap between India and China in terms of the total number of outbound postgraduates. Had the number of postgraduates been equal in 2012, India's growth would outpace China's, and India would be the largest sources of postgraduates in 2024.

Forecasted outbound postgraduate flows to 2024 by origin market

As the international higher education landscape continues to grow and change, provision and attainment of postgraduate degrees is becoming increasingly relevant both for individuals in search of advanced qualifications and skills and for countries seeking to increase their highly-skilled workforce. To further inform strategic priorities in the postgraduate market, we examined mobility forecasts for each of the 23 origin countries and territories to the six destination countries.



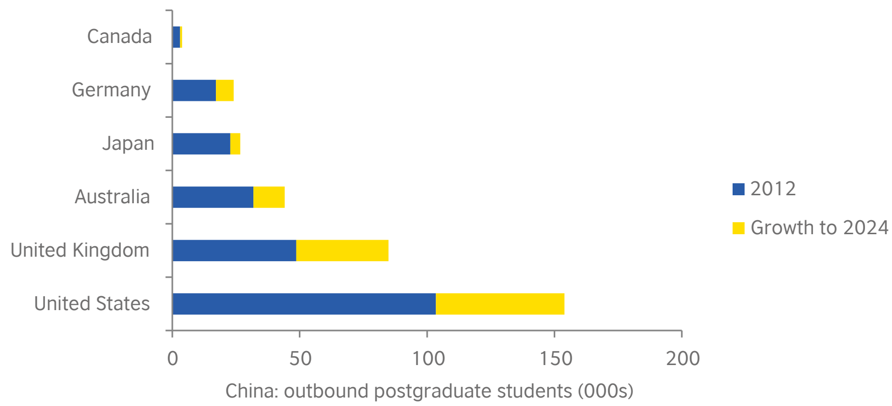
Source: Oxford Economics, British Council

Canada

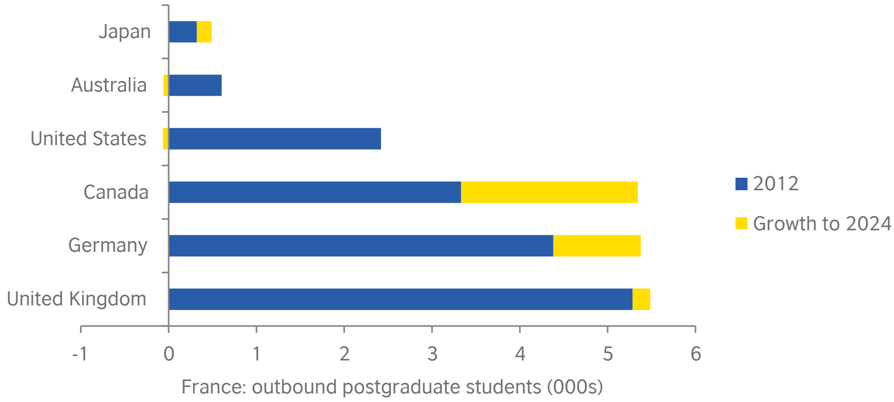
As the Canadian inbound postgraduate market grows, so will it its outbound market. In 2024, the US will continue to be the leading host destination for Canadian postgraduates, numbering 11,300, followed by the UK (4,800) and Australia (2,200). In terms of growth rates, the number of Canadian postgraduates traveling to the UK will increase at an annual average growth rate of 2.1 per cent, closely followed by those going to Germany (+2%). Growth in mobility to other markets will be significantly slower, if not negative.

China

The US will continue to be the number one destination for Chinese postgraduates to 2024, hosting nearly 154,000 students. Other top markets will include the UK, which is forecast to host 85,000 Chinese postgraduates, and Australia, with 44,000. The largest annual growth will be in Chinese postgraduates traveling to the UK (+4.7 per cent annual average growth), the US (+3.4%), Germany (+2.9%) and Australia (+2.8%). Japan will see annual average growth of Chinese postgraduates in-country of 1.4 per cent.



Source: Oxford Economics, British Council



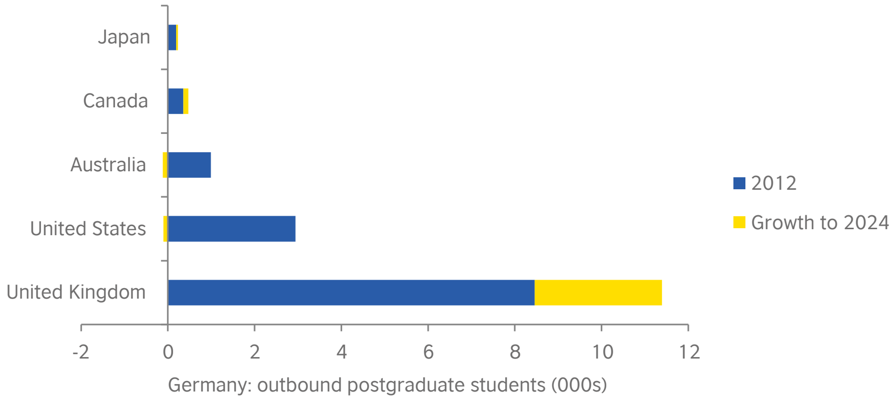
Source: Oxford Economics, British Council

France

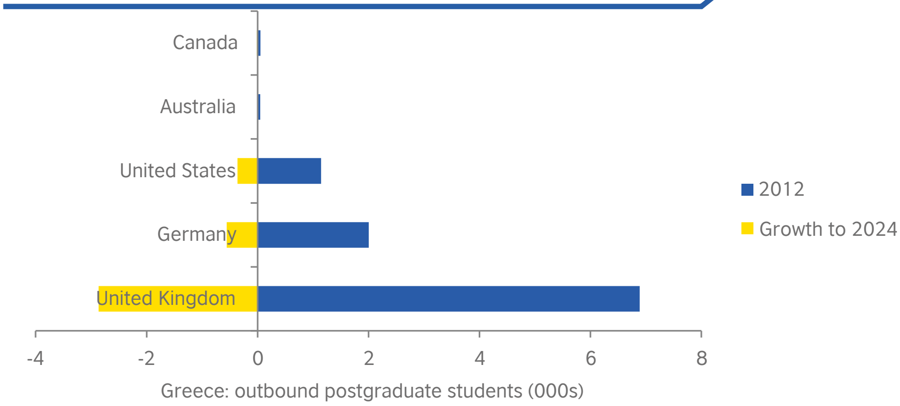
French postgraduates are forecast to show strong interest in a number of markets to 2024. The largest number of French students will travel to the UK (5,500) in 2024, followed by Germany (5,400) and Canada (5,300). The highest average annual growth rate will be in French students traveling to Canada (+4.0%), followed by Japan (+3.6%); growth annually is forecast to be slightly negative from France to the US (-0.2%) and Australia (-0.8%).

Germany

The highest number of German postgraduates will continue to travel to the UK for study, numbering 11,400, in 2024. The second and third most popular destinations of the six selected markets in 2024 will be the US (2,800) and Australia (900), though they will host fewer German postgraduates in 2024 then 2012, with annual average growth rates of -0.3 per cent and negative one per cent respectively. The flow of German postgraduates to the UK will annually average 2.5 per cent from 2012 to 2024. Canada will also see moderate growth as a destination for German students, with a 2.3 per cent annual average growth rate.



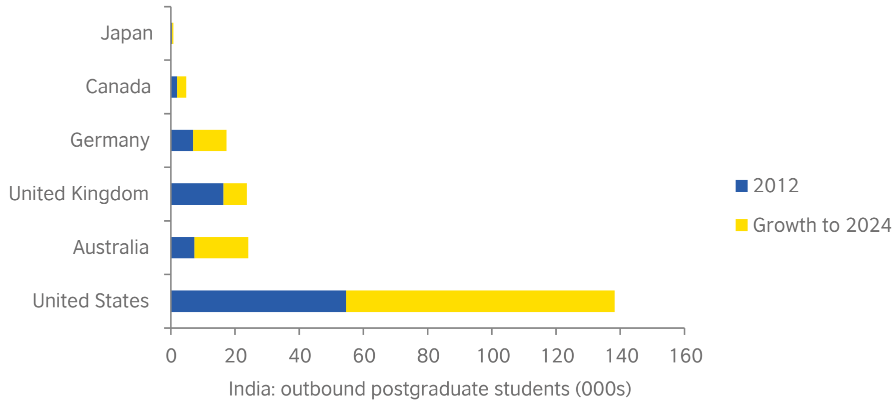
Source: Oxford Economics, British Council



Source: Oxford Economics, British Council
Note: No data for Greek students in Japan

Greece

The number of Greek outbound postgraduates traveling to each of the six selected destination markets will lessen to 2024; the biggest flow of postgraduates in 2024 from Greece will be to the UK (4,000), followed by Germany (1,400) and the US (800). Annual average growth rates will slow to all destinations led by the UK (-4.4%), US (-3.1%), Germany (-2.7%) and Canada (-2.5%).



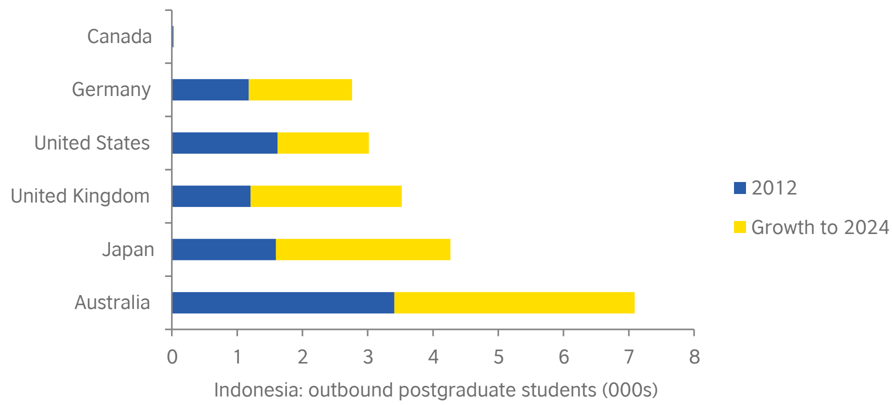
Source: Oxford Economics, British Council

India

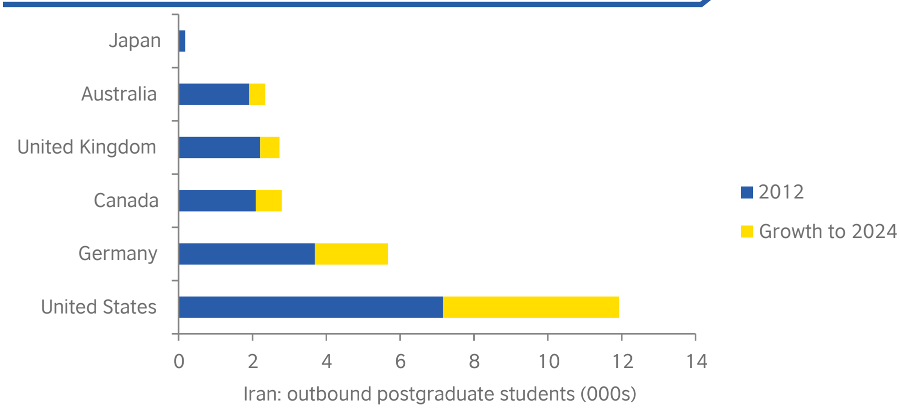
The largest flow of postgraduate students from India to the six selected destination countries will be to the US, which will host 138,000 Indian postgraduates, followed by Australia (24,100), the UK (23,600) and Germany (17,300). Forecasts show that the annual average growth of postgraduate flows from India will be highest to Australia (+10.4%), followed by the US (+8%), Germany (+7.9%), Canada (+7.8%) and Japan (+7.4%). Postgraduate mobility from India to the UK is forecast to grow annually, on average, 3.1 per cent from 2012 to 2024.

Indonesia

By 2024, of the six destination markets, Indonesian outbound postgraduates will mostly choose to study in Australia, which is forecast to host 7,100 Indonesian postgraduates, followed by Japan (4,300), the UK (3,500), the US (3,000) and Germany (2,800). The strongest annual average growth rate will be seen in postgraduate student flows from Indonesia to the UK (+9.3%), Japan (+8.5%), Germany (7.4%), Australia (+6.3%) and the US (+5.3%).



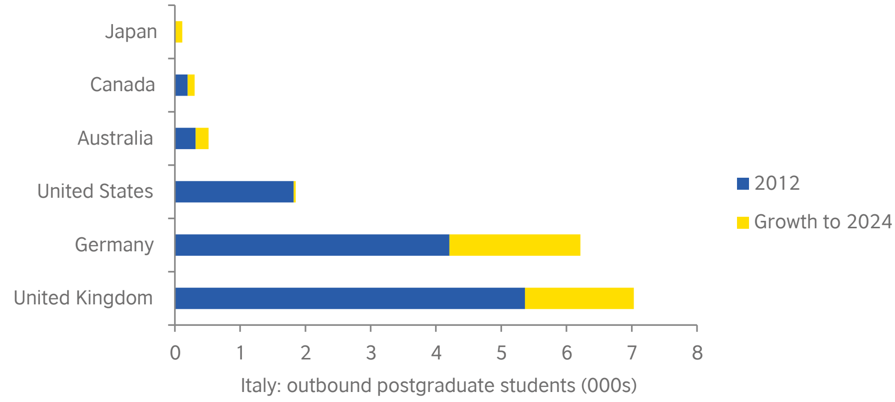
Source: Oxford Economics, British Council



Source: Oxford Economics, British Council

Iran

In 2024, the US is forecast to the top destination of the six selected markets for Iranian postgraduates, of whom 11,900 will study in the US. Other strong postgraduate flows of Iranian students will be to Germany (5,700), Canada (2,800) and the UK (2,700). The strongest annual average growth rate will be seen in postgraduate student flows from Iran to the US (+4.3%), Germany (+3.6%), and Canada (+2.4%).



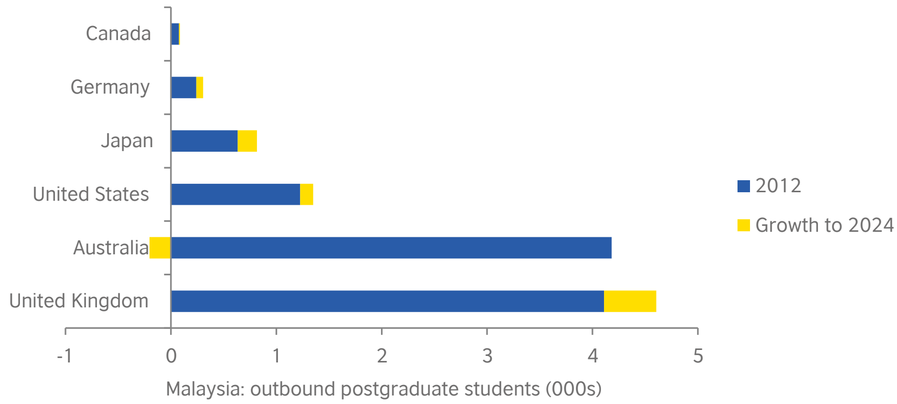
Source: Oxford Economics, British Council

Italy

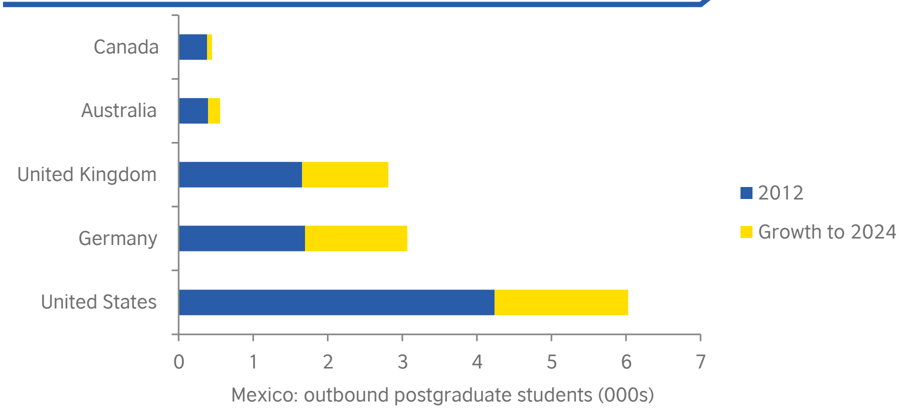
The UK will continue to be the number one destination for Italian postgraduates to 2024, hosting roughly 7,000 students. Other top markets will include Germany, which is forecast to host 6,200 Italian postgraduates, and the US, with 1,800. The strongest annual average growth rate will be seen in postgraduate student flows from Italy to Australia (+4.2%), followed by Canada (+3.7%), Germany (+3.3%) and the UK (+2.3%).

Malaysia

The UK will be the number one destination for Malaysian postgraduates to 2024, hosting roughly 4,600 students. Other top markets will include Australia, which is forecast to host 4,000 Malaysian postgraduates, and the US, with 1,300. The strongest annual average growth rate will be seen in postgraduate student flows from Malaysia to Japan (+2.1%), followed by Germany (+2%) and Canada (+1%).



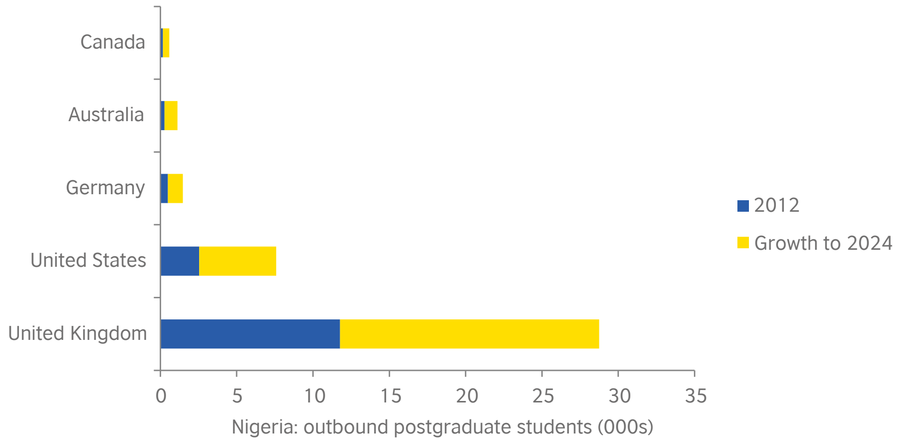
Source: Oxford Economics, British Council



Source: Oxford Economics, British Council
Note: No data for Mexican students in Japan

Mexico

Mexican postgraduates will mostly travel in 2024 for study to the US, which is forecast to host 6,000 Mexican postgraduates. Other popular destinations will be Germany (with 3,000 Mexican postgraduates) and the UK (2,800). The strongest annual average growth in Mexican postgraduate flows will be to Germany (+5.1%), the UK (+4.5%) and the US (+3%).



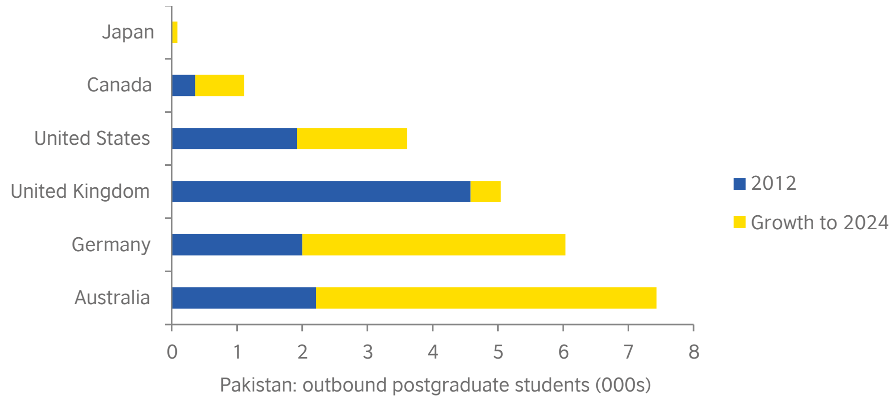
Source: Oxford Economics, British Council
Note: No data for Nigerian students in Japan

Nigeria

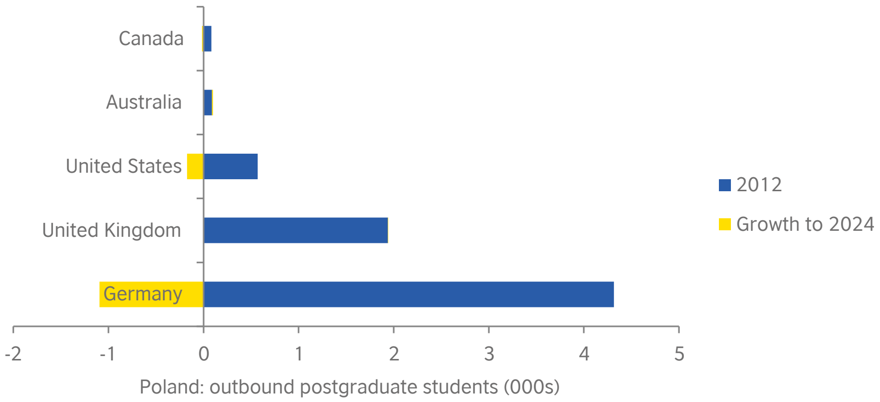
Nigerian postgraduates have overwhelmingly travelled to the UK for their studies, and this trend will continue. In 2024, the UK is forecast to host 28,800 Nigerian postgraduates, followed by the US, which will host 7,600. The highest annual average growth in Nigerian postgraduate flows will be to Australia (+12.7%) and Canada (+11.2%), albeit from small bases. Strong growth will also be seen in Nigerian postgraduate mobility to Germany (+9.7%), the US (+9.5%) and the UK (+7.7%).

Pakistan

The number of Pakistani postgraduates traveling for study will increase to 2024, with the top destination of the six selected markets being Australia, which will host 7,400 Pakistani postgraduates. Germany is forecast to host 6,000 Pakistani postgraduates, followed by the UK, which will host 5,000. The strongest growth in Pakistani postgraduate student flows will be to Australia (+10.6% average annual growth), followed by Canada (+9.9%), Germany (+9.6%) and the US (+5.4%).



Source: Oxford Economics, British Council



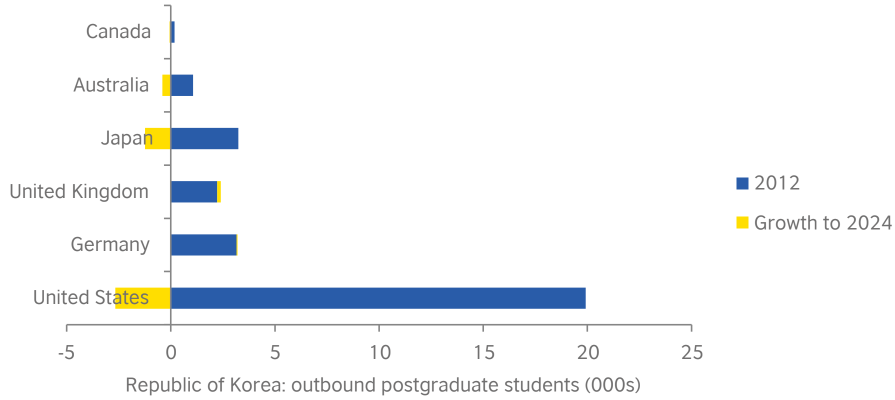
Source: Oxford Economics, British Council

Poland

Germany will continue to attract the highest number of Polish postgraduates in 2024, though it will host fewer students than it did in 2012. Germany will host 3,200 Polish postgraduates, followed by the UK (1,900) and the US (400). Australia will see positive average annual growth (+1.0%) in the number of inbound Polish postgraduates, but other markets will see no or negative growth, including the UK (0%), Germany (-2.4%), and the US (-3%).

Republic of Korea

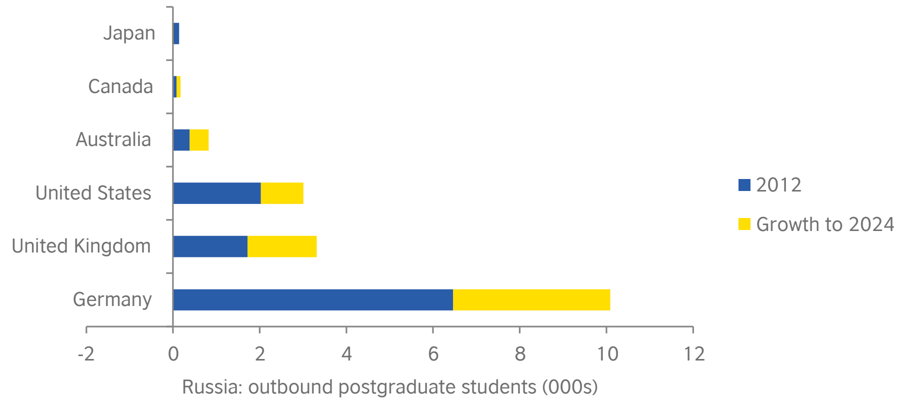
Fewer Korean postgraduates will enrol in the US in 2024, though it will remain the number one postgraduate market, hosting 17,200 Korean students in 2024. There will be moderate numbers of Korean postgraduates in Germany (3,200), the UK (2,400) and Japan (2,000) in 2024. The highest per cent annual average growth will be the UK (+0.6%) and Germany (+0.1%); the other four inbound markets in this study will have negative annual average growth in Korean postgraduate enrolment numbers.



Source: Oxford Economics, British Council

Russia

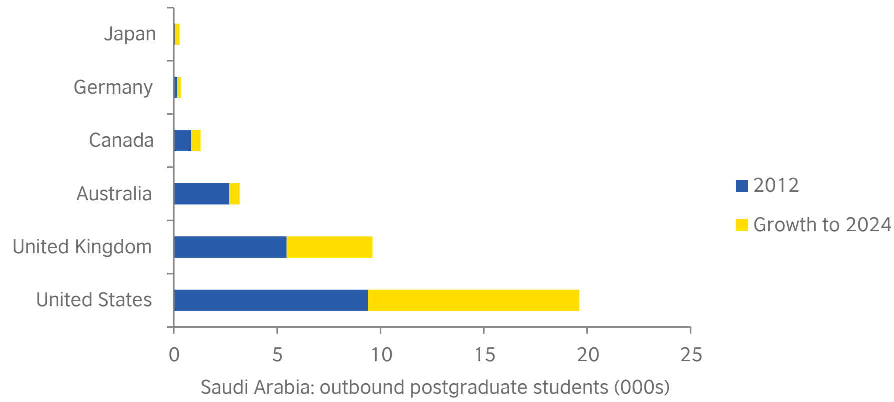
Germany is forecast to host 10,000 Russian postgraduates in 2024, followed by the UK (3,300) and the US (3,000). Annual average growth in Russian postgraduate enrolments will be strongest in the student flows to Australia (+6.5%), Canada (+6.3%) and the UK (+5.6%). Japan will see negative annual average growth from the Russian postgraduate market (-1.6%).



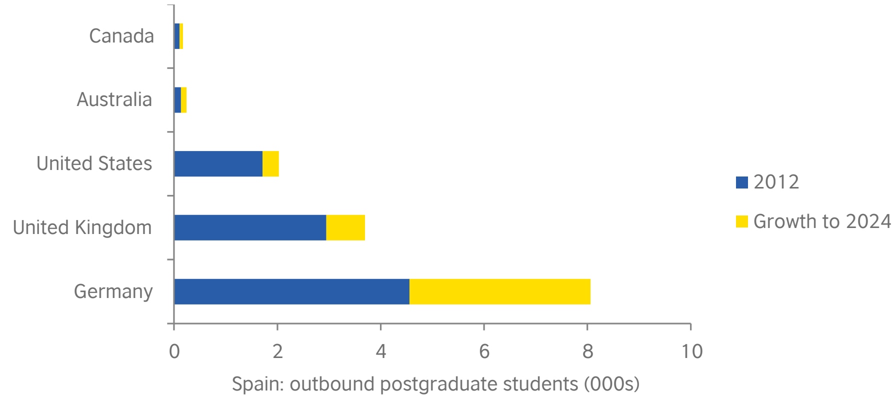
Source: Oxford Economics, British Council

Saudi Arabia

The US will host the highest number of Saudi Arabian students, 19,600, in 2024, followed by the UK (9,600) and Australia (3,200). The strongest annual average growth will be in Saudi Arabian postgraduate flows to Japan (+12.4%), the US (+6.3%), and Germany (+6.1%).



Source: Oxford Economics, British Council



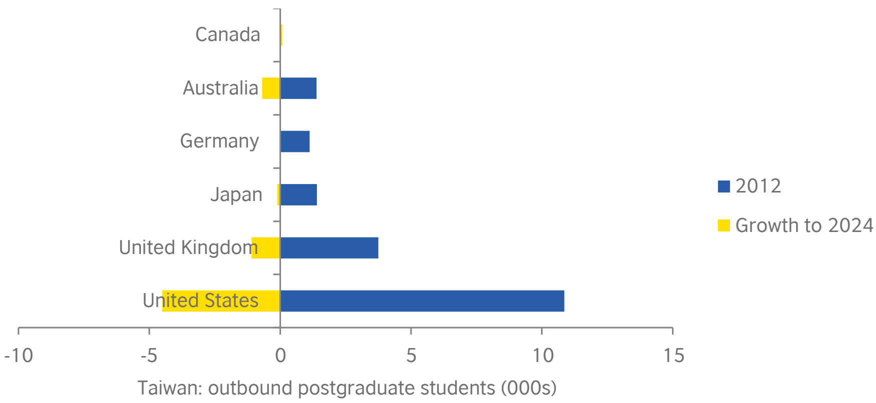
Source: Oxford Economics, British Council

Spain

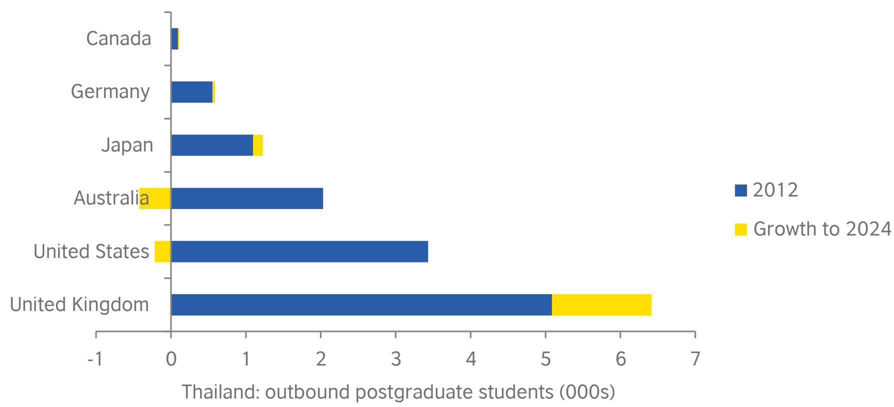
Germany will, out of the six destinations selected for this research, host the highest number of Spanish postgraduates, numbering roughly 8,000 in 2024. The UK is forecast to host 3,700 Spanish postgraduates, followed by the US, which will host 2,000. The strongest growth in postgraduate flows of Spanish students will be to Germany (+4.9% annual average growth) and Australia (+4.9%) as well as Canada (+4%).

Taiwan

Although the number of Taiwanese students in the US will decrease in the next decade, the US will be the number one destination of the six selected inbound markets, hosting almost 6,400 Taiwanese postgraduates in 2024. Other markets will also host fewer Taiwanese students, including the UK (2,700) and Japan (1,300). There will be annual average growth of 12.1 per cent of Taiwanese postgraduates traveling to Canada, though this is from a very small base. Most other annual average growth rates were negative, including Taiwanese postgraduate flows to Australia (-5.5%), the US (-4.4%) and the UK (-2.8%).



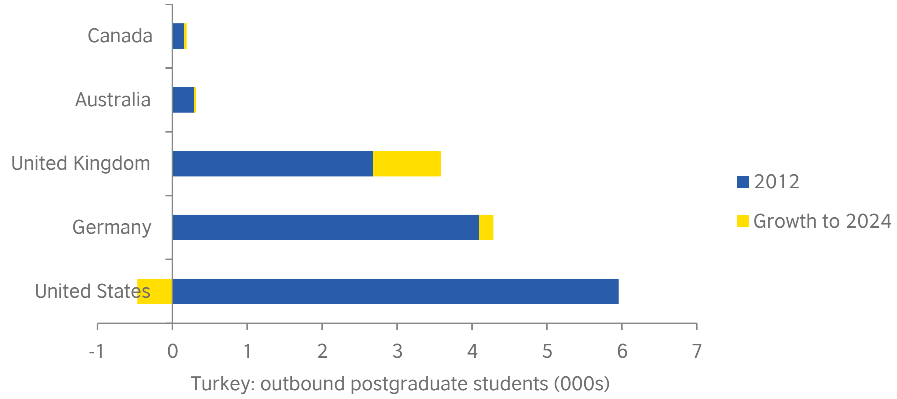
Source: Oxford Economics, British Council



Source: Oxford Economics, British Council

Thailand

The number of postgraduates from Thailand studying in the UK is forecast to increase to 2024, when the UK will host roughly 6,400 Thai postgraduates. Projections also show the US as the second most popular market, hosting 3,200 Thai postgraduates. Growth rates in postgraduate mobility from Thailand are mixed, with some inbound markets seeing average annual positive growth including the UK (+2%) and Canada (+1.1%) and others seeing average annual negative growth, including the US (-0.5%) Australia (-1.9%).



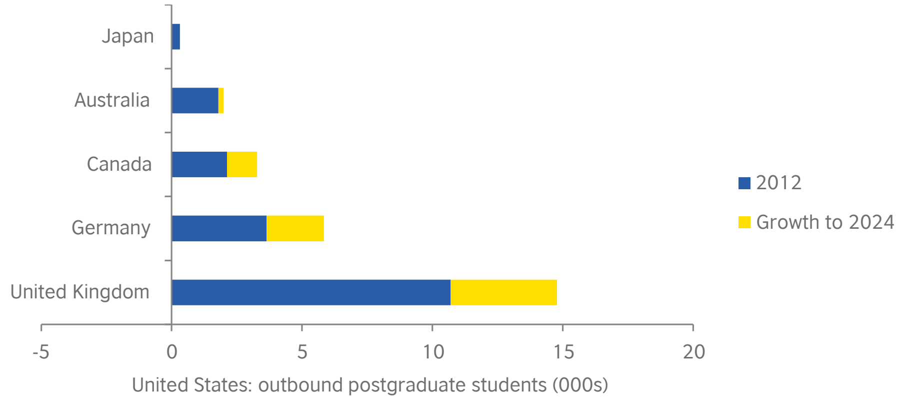
Source: Oxford Economics, British Council

Turkey

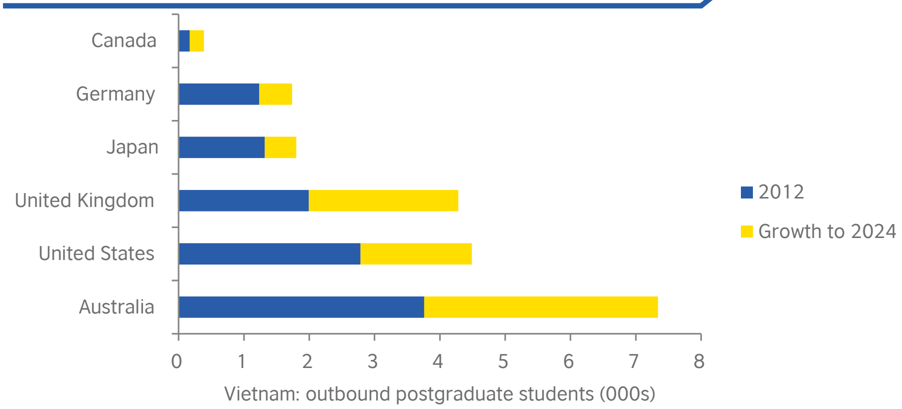
The number of Turkish students traveling to the US for postgraduate education will fall in the next decade according to forecasts but in 2024 it will remain the number one destination for Turkish postgraduates, hosting 5,500. Germany is forecast to host roughly 4,300 Turkish postgraduates and the UK, 3,600. Growth rates vary from moderate growth (the UK will see 2.5 per cent annual average growth) to negative growth (the US will see a decrease of 0.7 per cent annual average change) from 2012 to 2024.

United States

The UK will be the number one American postgraduate destination of the six selected markets, hosting about 14,800 US postgraduates in 2024. American postgraduate mobility will also be strong to Germany, which is projected to host 5,800 US students, and Canada, which will host 3,300. Growth will be positive for all selected destinations except for Japan, which will post negative growth (-0.4%) from the outbound US postgraduate market.



Source: Oxford Economics, British Council



Source: Oxford Economics, British Council

Vietnam

The top inbound country for Vietnamese postgraduates in 2024 will be Australia, which is forecast to host 7,300 Vietnamese postgraduates. Other popular destinations include the US, which is projected to host 4,500 Vietnamese postgraduates, and the UK (4,300). Growth rates of Vietnamese postgraduate flows will be positive and strong in some cases, including to Canada (+7%), the UK (+6.6%) and Australia (+5.7%).

Postgraduate outbound mobility and overall outbound mobility

In general, within the origin countries and territories analysed in this research, there is a close correlation between postgraduate international student mobility and overall (undergraduate plus postgraduate) international student mobility. However, there exist several cases where the number of postgraduate outbound students has exhibited diverging trends from overall outbound international students and that tendency is expected to continue.

The number of outbound postgraduate students from Canada, France, Germany, Saudi Arabia and Vietnam is expected to grow at a slower rate than the total number of outbound international students. By contrast, in the likes of Iran and Spain, the number of outbound postgraduate international students is expected to grow at a faster rate than the total number of outbound international students. These diverging trends are largely due to historic trends and momentum reflected in the forecast model.

Inbound postgraduate student mobility

The six selected inbound countries for this study are the US, UK, Germany, Australia, Japan and Canada. These markets were selected due to their international reputation for research excellence, the size of their postgraduate student population and data availability issues.

Recent inbound postgraduate trends

Inbound postgraduate flows from selected origins (2007-12)

INBOUND POSTGRADUATES FROM SELECTED ORIGIN MARKETS				
Country	Inbound postgraduates (000s) 2007	Inbound postgraduates (000s) 2012	Change (000s) 2007-12	Change (% annual ave.) 2007-12
United States	219	253	34	2.9%
United Kingdom	130	159	29	4.1%
Germany	63	74	11	3.4%
Australia	62	69	8	2.4%
Japan	26	34	8	5.4%
Canada	11	16	4	6.8%

Source: National sources, British Council

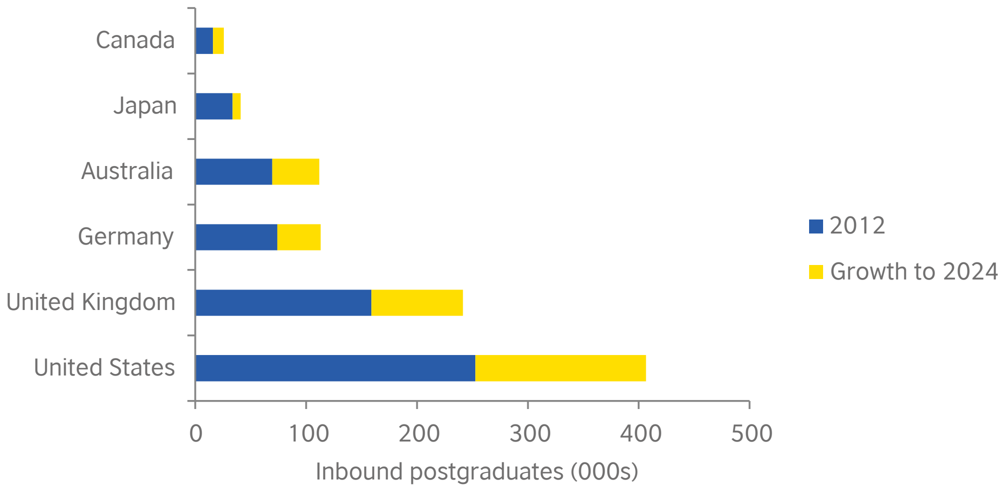
Throughout 2012, the US and UK remained the largest destination markets at the postgraduate level. As of 2012, the United States was the largest destination market for international postgraduates from the 23 origin markets of interest in this study. In 2012, the United States hosted 253,000 international postgraduates, which was an increase of 34,000 from 2007. This was the strongest growth of the six destination markets in absolute terms.

The United Kingdom was the second largest destination market for international postgraduates in 2012, with growth of 29,000 between 2007 and 2012. In relative terms, its annual average growth (4.1%) outstripped that of its key competitor, the US (2.9%). Germany hosted 74,000 inbound postgraduates from the 23 selected markets as compared to Australia, which hosted 69,000 and saw annual average growth of 2.4 per cent from 2007 to 2012. Canada had the highest annual average growth from 2007, 6.8 per cent, hosting 16,000 students from the selected markets in 2012.

Forecasted inbound postgraduate flows to 2024

This research forecasts the size of the postgraduate inbound market in each of the six destination nations from the 23 origin countries and territories selected.

Total inbound postgraduate flows from selected origins (2012-24)



Source: National sources, Oxford Economics, British Council

In absolute terms, the US is forecast to be fastest growing destination market over the next decade. In 2024, it is expected that the US will host 407,000 international postgraduates, which is an increase of 154,000 from 253,000 in 2012. The United Kingdom will host 241,000 postgraduates from selected origin countries and territories, an increase of 82,000 from 159,000 in 2012. Germany and Australia will host 113,000 and 112,000 postgraduates respectively in 2024.

Inbound postgraduate flows from selected origins (2012-24)

INBOUND POSTGRADUATES FROM SELECTED ORIGIN MARKETS					
Country	**Inbound postgraduates (000s) 2012**	**Inbound postgraduates (000s) 2024**	**Change (000s) 2012-24**	**Change (% annual ave.) 2012-24**	**Change (% annual ave.) 2007-12**
United States	253	407	154	4.0%	2.9%
United Kingdom	159	241	83	3.5%	4.1%
Germany	74	113	39	3.6%	3.4%
Australia	69	112	42	4.1%	2.4%
Japan	34	41	7	1.6%	5.4%
Canada	16	26	10	4.1%	6.8%

Source: National sources, Oxford Economics, British Council

In annual average growth terms, albeit starting from much lower bases, Australia and Canada are expected to grow slightly more quickly than the US. Japan and the UK are expected to see slowed growth as a destination market. With regards to the UK, this is partially a reflection of recent trends which show that inbound students from key future growth countries and territories such as India and Pakistan have fallen significantly, with the UK losing market share to key competitors. Some of Japan’s key inbound markets, including China, Korea and Taiwan, will experience significant demographic slowdowns; this adds to the fact that Japan has been losing some of its market share of Chinese outbound students. China is and will be by far the largest source of international postgraduate students, and this trend is forecast to continue to 2024. As such, markets that have or will see decreases in this population due to demographic or mobility trends will see slowed growth.

Inbound postgraduate flows attributable to China and India

Country	% total inbound postgraduate growth attributed to China 2012-24	% total inbound postgraduate growth attributed to India 2012-24
Australia	29 per cent	39 per cent
Canada	8 per cent	29 per cent
Germany	18 per cent	27 per cent
Japan	56 per cent	7 per cent
United Kingdom	44 per cent	9 per cent
United States	33 per cent	54 per cent

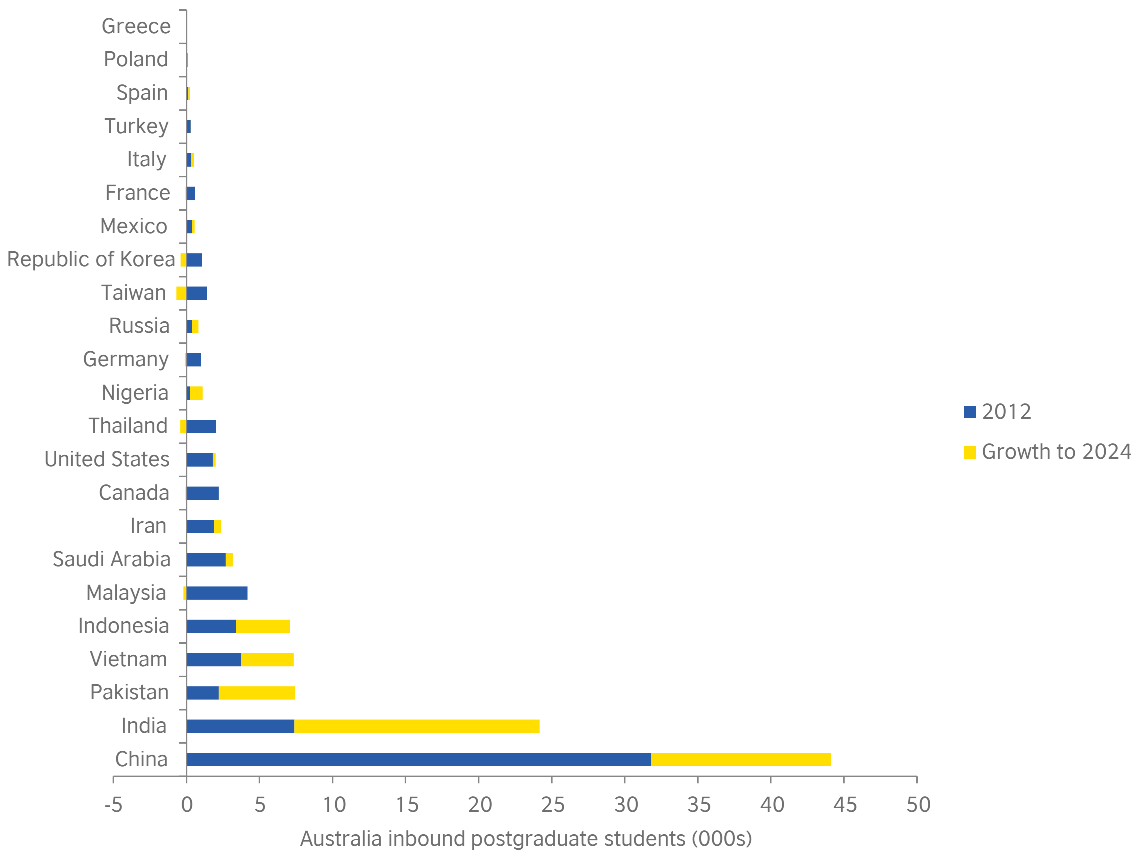
Source: National sources, Oxford Economics, British Council

As shown above, within particular destination markets, there is a very strong reliance on China and India in terms of forecast growth in inbound postgraduates. For example, in the UK, China alone is expected to account for 44% of growth in inbound postgraduates (from the selected origin markets) over the next decade. Therefore, much of the UK's future growth as a host country hinges critically upon just one market. This implies that the UK may lose market share of other origin markets and will be reliant upon China in driving future growth in inbound postgraduates. Similarly, within the US, more than half (54%) of its growth in inbound postgraduates is expected to come from India alone.

Forecasted inbound postgraduate flows to 2024 by destination market

It is useful to examine the growth in postgraduates from the selected origin markets to each of the six destination markets.

Postgraduate flows to Australia to 2024

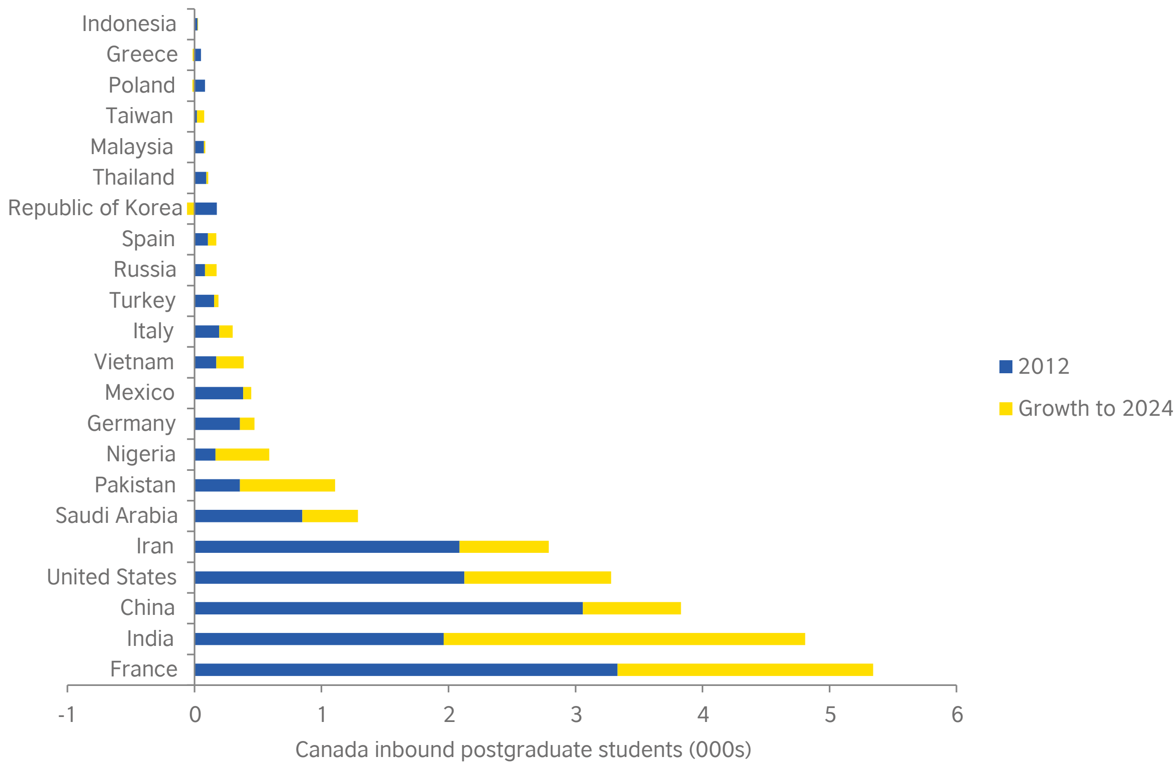


Source: Oxford Economics, British Council

China will continue to provide the largest number of postgraduate students to Australia to 2024 of the selected origin markets, followed by India. The number of students from China is expected to be 44,000, up from nearly 32,000 in 2012, and the number of Indian postgraduates will rise to 24,000. Pakistan, Vietnam and Indonesia will make up the rest of the top five sending countries in 2024, sending roughly 7,000 students each to Australia.

In terms of annual average growth, Nigeria, with 12.7 per cent annual average change, will experience the highest growth in postgraduate outbound mobility to Australia, followed by India (+10.6%), Pakistan (+10.4%), Russia (+6.5%) and Indonesia (+6.3%). Interestingly, Russia, despite a decline in tertiary enrolments, is forecast to increase its postgraduate outbound mobility based on historic trends and bilateral trade forecasts. Declines in annual average growth will be seen in markets including Taiwan (-5.5%), Korea (-3.9%) and Thailand (-1.9%).

Postgraduate flows to Canada to 2024

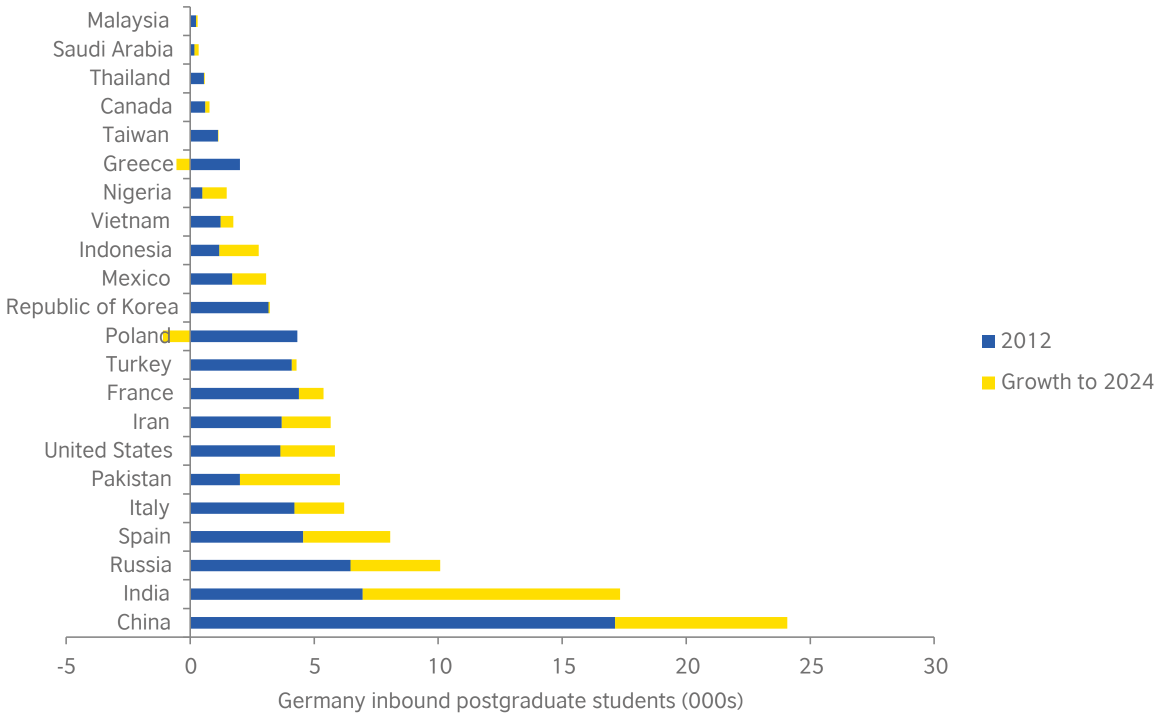


Source: Oxford Economics, British Council

In 2024, France will send the highest number of postgraduates to Canada, numbering 5,300, followed by India (4,800), China (3,800), the US (3,300) and Iran (2,800). India will go from Canada's fifth-largest sending market of the 23 selected origin destinations to the second largest.

Despite declining local tertiary enrolments, Taiwan will have the highest annual average growth, at 12.1 per cent followed by Nigeria (+11.2%), Pakistan (+9.9%), India (+7.8%) and Vietnam (+7%). It is worth noting that Taiwan's high growth rate stems from a low base number of mobile postgraduates traveling to Canada. Poland (-1.9 per cent annual average change), Greece (-2.5%) and Korea (-3.3%) will send fewer students to Canada in 2024 as compared to 2012.

Postgraduate flows to Germany to 2024

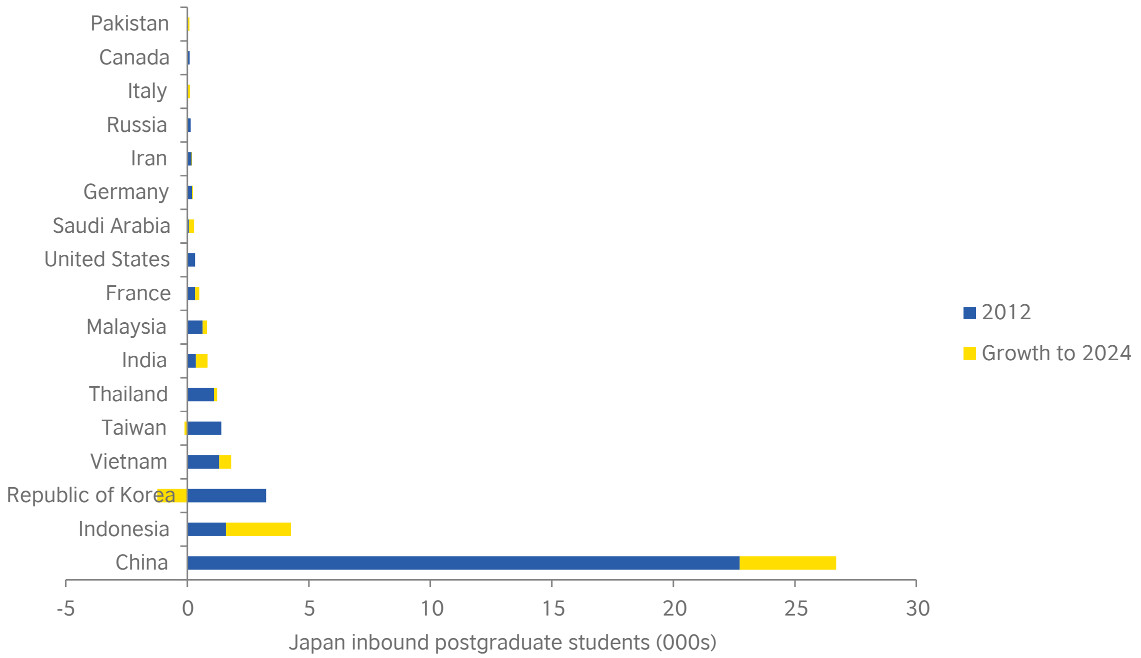


Source: Oxford Economics, British Council

China is expected to send 24,000 students to Germany in 2024, an increase from 17,000 in 2012. India will be the second-largest sending market to Germany in 2024, followed somewhat distantly by Russia (10,000), Spain (8,000) and Italy (6,200). The numbers of mobile postgraduates from Poland and Greece to Germany are expected to decline from 2012 to 2024.

The growth in Nigerian postgraduates traveling to Germany will see the highest annual average growth from 2012 to 2024, equalling 9.7 per cent. Strong annual growth in postgraduate mobility to Germany is also expected from Pakistan (+9.6%), India (+7.9%), Indonesia (+7.4%) and Saudi Arabia (+6.1%).

Postgraduate flows to Japan to 2024

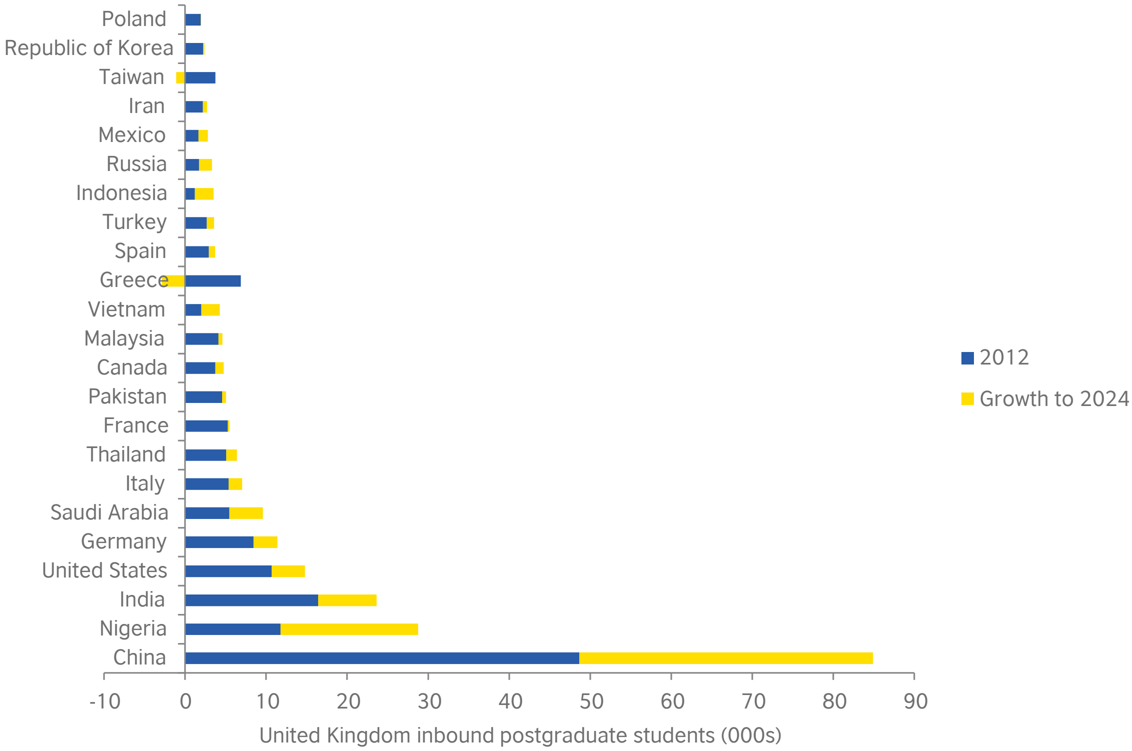


Source: Oxford Economics, British Council

Of the 23 selected origin markets, China is by far the largest provider of postgraduates to Japan and this status will remain unchanged to 2024, when almost 27,000 Chinese postgraduates are expected to study in Japan. Korea, currently the second largest market, will become the third largest in 2024; Indonesia, set to send 4,300 students in 2024, will become the second largest market.

The highest annual growth is expected from Saudi Arabian students traveling to Japan at a rate of 12.4 per cent, from a low base. Strong growth will also come from Indonesia (+8.5%) and India (+7.4%). Postgraduate numbers from Italy and Pakistan, for which there is no data in 2012, are expected to grow nominally in the next decade while moderate declines per year are expected from Korea (-3.9%) and Russia (-1.6%).

Postgraduate flows to the United Kingdom to 2024

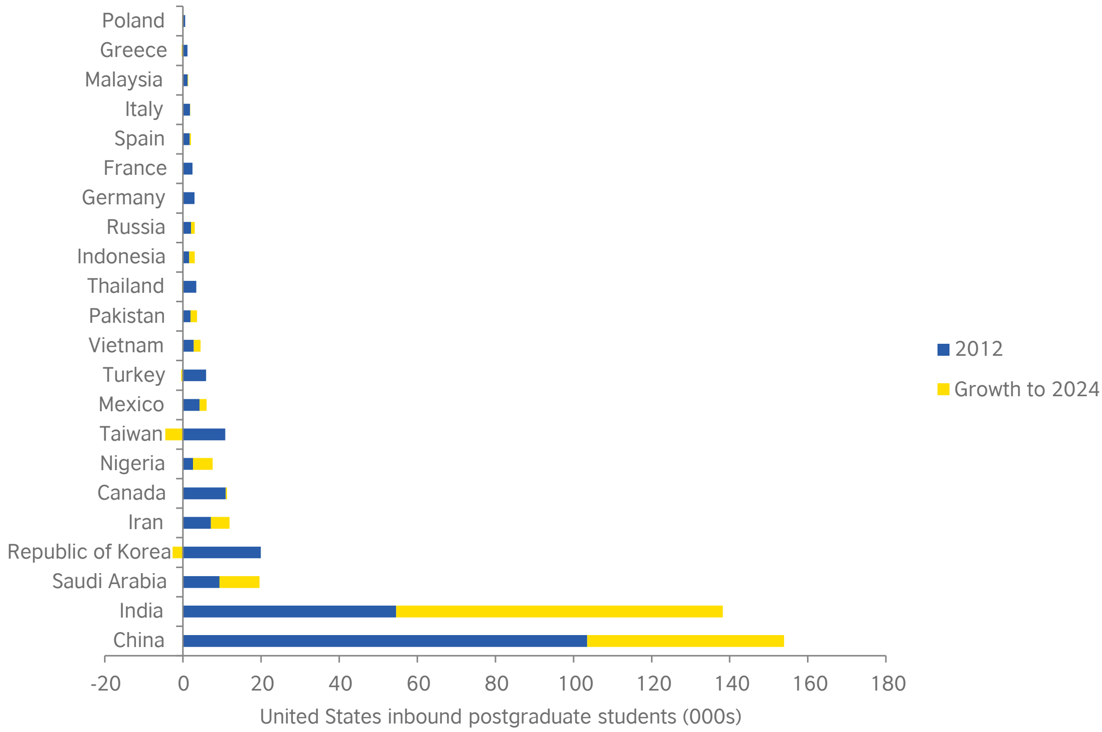


Source: Oxford Economics, British Council

Of the 23 origin markets addressed in this research, China sends the highest number of postgraduates to the UK (49,000 students) followed by India (16,000) and Nigeria (12,000). This will change over the next decade, however, and while China will continue to dominate UK postgraduate enrolments with 85,000 postgraduates, Nigeria will send the second highest number of postgraduates (29,000), followed by India (24,000) and the US (15,000).

The most substantial growth annually is expected from Indonesia (9.3 per cent annual average growth), Nigeria (+7.7%), Vietnam (+6.6%) and Russia (+5.6%). Enrolments will slow annually from Greece (-4.4%) and Taiwan (-2.8%). Enrolments from major source countries will continue to grow per year: China will grow at an annual average rate of 4.7 per cent, India at 3.1 per cent and the US at 2.7 per cent.

Postgraduate flows to the United States to 2024



Source: Oxford Economics, British Council

The postgraduate inbound market in the US is dominated by Chinese and Indian students, numbering nearly 104,000 and 55,000 respectively in 2012. By 2024, these numbers are expected to grow to approximately 154,000 Chinese postgraduates and 138,000 Indian postgraduates in the US. Of the selected origin countries, as of 2024, Saudi Arabia will send the third highest number of postgraduates (19,600), followed by Korea (17,200) and Iran (11,900).

The greatest growth per annum from 2012 to 2024 will come from Nigeria (+9.5%), followed by India (+8%), Saudi Arabia (+6.3%), Pakistan (+5.4%) and Indonesia (+5.3%). The annual growth in Chinese postgraduates to the US to 2024 is expected to be 3.4 per cent. Conversely, a number of countries and territories will send fewer postgraduates to the US in 2024 including Taiwan (-4.4% annual change), Greece (-3.1%), Poland (-3%) and Korea (-1.2%).

Bilateral postgraduate student mobility

While the relationships between the selected 23 origin countries and territories and six destination countries have been examined in terms of inbound and outbound mobility, it is also useful to examine the major bilateral postgraduate flows to 2024.

Rank	Largest postgraduate international mobility flows (2012)			Fastest growing postgraduate international mobility flows (2012-2024)			Largest postgraduate international mobility flows (2024)		
1	China	104K	US	India	+83K	US	China	154K	US
2	India	55K	US	China	+50K	US	India	138K	US
3	China	49K	UK	China	+36K	UK	China	85K	UK
4	China	32K	Australia	Nigeria	+17K	UK	China	44K	Australia
5	China	23K	Japan	India	+17K	Australia	Nigeria	29K	UK
6	South Korea	20K	US	China	+12K	Australia	China	27K	Japan
7	China	17K	Germany	India	+10K	Germany	India	24K	Australia
8	India	16K	UK	Saudi Arabia	+10K	US	China	24K	Germany
9	Nigeria	12K	UK	India	+7K	UK	India	24K	UK
10	Canada	11K	US	China	+7K	Germany	Saudi Arabia	20K	US

Source: National sources, Oxford Economics, British Council

To 2024, postgraduate international student flows between China and India and the leading destination countries are expected to remain the largest in the marketplace. Outflows from China and India made up seven of the ten largest bilateral postgraduate student flows in 2012 and are forecast to make up eight of the ten largest bilateral flows by 2024. Nigeria to the UK (+17,000 postgraduates in the next decade) and Saudi Arabia to the US (+10,000) are expected to be among the top ten fastest growing bilateral flows to 2024.

Key findings

- **The impact of an ageing China:** Over the next decade there will be a large swing in China's demographics, with the tertiary-aged population likely to decline significantly. Other Asian economies including Taiwan, Korea and Vietnam are expected to experience the largest annual average contractions in their tertiary-aged populations over the next decade. By contrast, the tertiary-aged population in Nigeria, India and Indonesia are expected to boom, which will have a positive effect on tertiary enrolment levels within these countries.
- **Economies to remain strong, across the board:** GDP per capita is expected to rise across all 23 origin markets over the next decade, with Asian economies including China, Vietnam, India, Indonesia and Pakistan expected to experience the strongest annual average growth rates.
- **Tertiary enrolment rates forecast to grow:** Across almost all 23 origin countries and territories of interest, tertiary enrollments will increase to 2024. Saudi Arabia, India and Indonesia are expected to experience particularly strong growth. Given their strong projected demographics combined with strong tertiary enrolment rate growth, India and Indonesia are expected to have amongst the largest growth in tertiary enrolments to 2024. In the next decade India will overtake China as the country with the highest number of tertiary enrolments.
- **India and China to fuel growth in outbound postgraduates:** In aggregate, total outbound postgraduates are forecast to rise by 335,000 to 2024 within the 23 origin markets, with India and China accounting for 36 per cent and 33 per cent of the total growth respectively.
- **Over next decade, India to dominate as a student source:** India is expected to be one of the fastest growing sources of international postgraduate students over the next decade. This is to be driven by its booming number of tertiary enrolments and rising postgraduate outbound mobility ratio (which is driven by strong economic growth and expanding household incomes). For destination markets, this is likely to be the real opportunity for inbound student growth over the next decade.
- **India and Pakistan to be among fastest growing markets:** Student flows from the likes of India and Pakistan to the UK have dropped significantly in recent years. These two markets in particular are forecast to be amongst the fastest growing sources of outbound postgraduate students overall to 2024 and due to recent enrolment trends, the UK is forecast to lose market share of students from these countries over the next decade. Students from Pakistan are forecast to travel to Australia and Germany in greater numbers over the next decade and Indian students will choose the US as well as Australia as a preferred postgraduate study destination.
- **Despite demographics, China to continue boom:** China is forecast to experience strong growth in outbound postgraduates also, with the negative impact of a declining tertiary aged population being offset by growth in its tertiary enrolment rate and outbound postgraduate mobility ratio. By 2024, it is still likely to be the largest source of outbound postgraduates, with India catching up quickly in second place.
- **Significant postgraduate growth in other key nations:** Nigeria, Saudi Arabia, Pakistan and Indonesia are forecast to post substantive increases in outbound postgraduates.
- **The US as fastest-growing postgraduate host destination:** With an increase of 154,000 students expected to 2024, the US is forecast to continue to dominate as a host market, in absolute terms. The UK is forecast to be the second-fastest growing destination market in absolute terms, with growth of 83,000

expected to 2024. However, in relative terms, the UK is expected to be the second-slowest growing destination, with annual average growth of 3.5 per cent from 2012 to 2024, down from 4.1 per cent from 2007 to 2012, only ahead of Japan.

- **Bilateral mobility dominated by China and India:** International student flows from these two countries to the traditional destination markets will continue to dominate during the forecast period.

In conclusion

This research presents an examination of global postgraduate student mobility to 2024, based on available data and historic trends. Our forecasts show that the US will continue to dominate postgraduate enrolments globally, with the UK hosting the second highest number of postgraduate students. It also concludes that while China and India will continue to drive global enrolments, countries should be cautious about depending heavily on these two countries for postgraduates, especially with Pakistan, Saudi Arabia, Nigeria and Indonesia showing signs of strong growth.