IN SEARCH OF EXCELLENCE
CHINESE STUDENTS ON THE MOVE
Over the last 20 years, internationalization of education has become a priority for governments and higher education (HE) institutions alike, and the number of students moving across borders for HE has expanded exponentially, with one of the largest contributors being students from the People’s Republic of China. ‘Bright Futures’ draws on the first representative sample survey of Chinese students in the UK (as well as surveys of a comparable group of Chinese students in Germany and China, and control groups of home students in the UK and Germany) to analyse what characterizes this group.

In contrast to oft-repeated stereotypes that assume international students have common characteristics based on their national origins or as members of a privileged elite, we find that Chinese students overseas are heterogeneous (just as home students are). We also find that in many ways Chinese students at home and abroad converge in their approach to HE with home students in the UK and Germany, pointing to a global approach to higher education that aligns students from different origins and backgrounds.

In coming to the UK, Chinese students are definitely seeking an excellent education, but our findings show that UK universities are missing out on supporting excellence in their recruitment policies in certain ways. UK statistics show concentration of Chinese students in the UK in certain subjects, particularly business studies, meaning that British universities are missing out on supporting excellence in other areas of specialization, particularly science, technology, engineering and mathematics (STEM). Emphasising this point, 35 percent of respondents at top universities in China who had considered HE overseas said the main factor in not taking this route was cost considerations. We find that a significantly higher proportion of Chinese students in Germany study STEM subjects than in the UK, even though UK HE institutions have world excellence in STEM fields.

Some of our key findings are outlined below.

WHO ARE THEY?
- More than a third of Chinese students studying in Europe do not come from privileged middle class backgrounds.
- Chinese students in the UK include both high achievers and low scorers, and thus show a similarly broad range of prior academic achievement to their peers in China.
- In the UK, the predominance of Chinese students in business and economics (51% of undergraduates and 56% of masters students) contrasts with their relative under-representation in STEM subjects, social sciences and humanities and ‘other’ (which includes law and medicine).
- By contrast, Germany attracts many more STEM students (61% both for undergraduates and masters students).

WHY DO THEY COME?
- Motivation for studying abroad is not simply about building a CV or enhancing career prospects.
- Respondents reflect the ideal of a HE student having broad aspirations and being pro-active, open and aware of their individuality.
- We find similar expectations of what students want to gain from their HE experience among Chinese students in the UK, Germany and China, as well as among home students in Europe, pointing to increasingly standardized orientations among HE students globally.

DO THEY PLAN TO STAY?
- Around half of Chinese undergraduate students in our survey (60% in the UK, 47% in Germany) have intentions to continue studying after their current degree, and overwhelmingly in their current host country (the UK or Germany, both 85%).
- Among those who intend to work after their current degree, around 70 percent of Chinese students in the UK (if we include those who are not certain) plan to return to China. This figure is around 35 percent in Germany.

ARE THEY STRUGGLING?
- Adjustment to the academic learning environment in European universities is not a problem for a large majority of our respondents.
- Chinese international students are not more distressed than home students in Germany and the UK.
- Our survey finds that during their studies in the UK these students are achieving a broad spread of grades, and thus present a similarly mixed picture to their home student peers.

EXECUTIVE SUMMARY

Cover photo: Students toss study materials into the air after finishing their final test in the annual national college entrance examination (gaokao), at the gate of a middle school in Chongqing, China, on 8 June 2013. Photo by Ran Wen/China Daily.
Over two thirds of Chinese students, excluding research students, come to the UK for masters degrees, in Germany, the picture is similar. This reflects, in part, the relatively limited number of places in China on masters programmes, with only 12 percent of the domestic student population graduating from such courses. As we discuss further below, while these students are distributed across the full range of disciplines, they are overrepresented in certain subjects.

Motivation for studying abroad is not simply about building a CV or enhancing career prospects, as previous academic studies and policy analyses commonly assume. Rather than a narrow instrumental focus, motivations expressed by our survey respondents reflect the ideal of a HE student having broad aspirations and being pro-active, open and aware of their individuality. Chinese students in the UK give high importance to such motivations as gaining new experiences (89%), meeting people from different backgrounds (83%), gaining a world class education (82%), realizing their worth as a person (82%) and being part of the global world (63%), in addition to enhancing their CV and career prospects (83%). Furthermore, we find broadly similar expectations of what they want to gain from their HE experience among Chinese students in Germany and China, pointing to increasingly standardized orientations among HE students globally.

In terms of their intentions post-study, we find around half of Chinese undergraduate students (60% in the UK, 47% in Germany) plan to continue studying after their current degree. In terms of where they plan to continue to study there are high levels of inertia—those undergraduates studying in the UK or Germany overwhelmingly plan to continue their studies in their current host country (both 85%).

In comparison, for those planning to work after study we find quite distinct intentions between Chinese students in the UK and Germany. Even though the possibility of staying to work after graduating is not a decisive factor for Chinese students when choosing in which country to study (only about 14% of Chinese students who chose to study in the UK and Germany said this was ‘very/extremely important’ in their decision), we find that Chinese students in Germany are more likely to consider working there after graduation (17% plan to stay in Germany for work, a further 9% say ‘maybe’), than those studying in the UK (only 7% plan to stay in the UK for work, plus a further 13% ‘maybe’). This likely reflects a range of factors, including Germany’s more flexible post-study regulations, the effects of plans for Brexit and the UK’s generally hostile climate towards migration.
Chinese students choose to study in Europe because they are seeking excellence in their university education. In terms of choosing the UK and Germany, the two European countries in our survey, as study destinations, ‘quality of education’ was the most popular reason; 93 percent of Chinese students in our survey said that was ‘very/extremely important’ in their decision. In selecting a particular university, Chinese students’ top three reasons reveal the crucial influence of rankings, both in the UK and to a lesser extent even in Germany (where rankings are not as widely used): rated as ‘very/extremely important’ were the ranking of the subject they wish to study at that university (UK 89%, DE 74%); followed by the availability of the student’s preferred subject (UK 87%, DE 80%); and the overall ranking of the university (UK 80%, DE 57%).

However, while the motivation of students contributes to UK universities’ aspirations towards excellence, patterns of recruitment do not necessarily serve the aims of the universities in achieving this. Chinese students (both in our survey, and in HESA data used in the next two figures), are concentrated in certain subjects, indicating that universities are recruiting lower numbers of excellent students than they might, particularly for science and technology degrees. In the UK, the predominance of Chinese students in business studies and economics (57% of undergraduates and 56% of masters students) contrasts with their relative under-representation in STEM subjects, social sciences and humanities and ‘other’ (which includes law and medicine). By contrast, Germany attracts many more STEM students (61% of UG and masters students).

Figure 5: Subjects studied by undergraduate and masters students

<table>
<thead>
<tr>
<th>Arts &amp; architecture</th>
<th>Business &amp; economics</th>
<th>Humanities, social sciences &amp; education</th>
<th>Science, engineering, computer science</th>
<th>Other (medical studies, law, other)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS CN</td>
<td>9%</td>
<td>22.4%</td>
<td>13.4%</td>
<td>42.4%</td>
</tr>
<tr>
<td>CNS DE</td>
<td>8.3%</td>
<td>19%</td>
<td>11.1%</td>
<td>69.7%</td>
</tr>
<tr>
<td>CNS UK</td>
<td>13%</td>
<td>42.6%</td>
<td>19.5%</td>
<td>22.3%</td>
</tr>
</tbody>
</table>

Source: Chinese Ministry of Education (2016, for HS CN), DZHW (academic year 2016-17, for CNS DE), HESA (reporting year 2016-17, for CNS UK)

Figure 6 plots the imbalance in a given subject between the proportion of Chinese in the UK and Germany represented compared to the proportion of undergraduate and masters students in the same subjects in China. In other words, the plot provides a synthetic measure of the balance between the Chinese demand for certain fields of study in Germany and the UK compared to that in China. Any value above 1 means that there is an imbalance in favour of the UK or Germany in the demand for studies in each specific field. Values below 1 show an imbalance in favour of China.

This perspective highlights striking differences between the UK and Germany. The proportion of Chinese students in business and economics in the UK is vastly larger than that in China, and the ratio for the proportion of these students in Germany and China is close to one. By contrast, there is a large positive imbalance in the weight of Chinese students in STEM subjects in Germany, which we do not see in the case of the UK. The weight that Chinese students have in arts and architecture, the humanities and the social sciences and the field of education is more or less proportionate to the weight of this student population in China.

In sum, the UK has scope to expand its recruitment of Chinese students, particularly in the areas of STEM subjects.
International students are often spoken of as having common and predictable characteristics based on their national origins and social backgrounds. But our comparisons of Chinese international students with UK and German home students, as well as with Chinese students in China, show that there are significant variations within each group, and many more commonalities across all student groups, than the ‘national origin’ perspective would imply.

The social backgrounds of Chinese international students are more varied than is usually assumed when international education is considered mainly an upper and middle-class phenomenon. In terms of parental background, they are still a select group in comparison to other students in China; about 66 percent of Chinese students in China, show that there are significant variations within each group, and many more commonalities across all student groups, than the ‘national origin’ perspective would imply.

Regarding their prior academic background, Chinese students in the UK include both high achievers and low scorers, and thus show a similarly broad range of prior academic achievement to their peers in China, contradicting the idea that only the most brilliant students in each cohort move abroad to pursue higher education. We also find that, as for UK home students, Chinese students are enrolled in UK universities at all levels of the ranking scales.*

Our findings show that Chinese students in the UK and Germany do not generally have difficulty in adapting to the new academic environment when they move for HE. Only six percent of Chinese students in the UK and eight percent in Germany reported that they ‘often/always’ have problems adapting to the academic learning style, while 75 percent and 67 percent, respectively, said they ‘never/seldom’ have issues with this.

Many of the transition and adjustment concerns regarding international students start from the assumption of national differences in academic traditions and learning cultures. Our survey does not reveal wide divergences between Chinese international students and home students in the UK and China regarding attitudes to learning and expectations. It is a widely held view that memorizing and lack of analytical thinking characterize Chinese students and the Chinese education system. In our survey, only half of the Chinese undergraduate students in China agree that memorizing makes a good learner, while an even smaller percentage of Chinese students in the UK (41%) and almost as many UK home students (47%) hold this view. At masters level, a lower proportion in all groups agree that memorizing is a good approach (Chinese students in the UK 39%, Chinese students in China 43%, the biggest drop is amongst UK home students to 32%). The views of Chinese students in Germany are very similar to their peers studying in the UK. This highlights the fact that all students, regardless of background, need to learn skills appropriate to their level of study, and this is just as much the case for home as for international students.

On valuing independent thinking as an underlying principle of learning, again we do not find large differences across groups. Among Chinese students in both the UK and Germany, 89 percent agree that ‘wisdom is knowing how to find the answer’, and similar percentages of Chinese home students (82%) and UK home students (87%) agree, as well as slightly fewer German home students (80%).
Mental Distress

From our survey, we can evaluate mental distress among international students. To measure mental distress, our survey uses the Kessler (K6) scale, which is widely used in epidemiological surveys to measure non-specific psychological distress. The items used to build this scale are a mix of behavioural, emotional and psychological symptoms that are important to wellbeing and mental outcomes. About one-sixth of Chinese international students in our survey reported experiencing some form of psychological distress during the 30 days prior to the survey. This proportion is quite similar to that among our home student control groups in the UK and Germany, which means that Chinese students adjust to the standards of the majority population attending tertiary education in their respective European destinations.

Figure 11: Average levels of mental distress among Bright Futures respondents in China, the UK and Germany.

These patterns can be explained largely by differences in programmes’ student intake regarding students’ prior performance. Our data includes information on previous educational achievement, so we can relate students’ university achievement to their prior academic performance.

In our survey, we ask students how they were ranked in their last high school class. Chinese studying in the fields of business and economics and arts and architecture in the UK report the lowest average high school ranking of all Chinese students (with only 24% stating they were near the top of their class). This is comparable to high school grades for students in China studying the same subjects. In contrast, Chinese in STEM subjects in the UK report the highest average high school class ranking (41% state they were near the top of their class), considerably more than the 28% of STEM students in China claiming the same class rank.

How well Chinese undergraduate students do relative to their British peers differs substantially across subject areas (according to HESA). In STEM subjects, Chinese students do only marginally worse than home students; for example, in mathematics, 35 percent of them gain a first class degree, only six percentage points fewer than home students, for 2:1 class the equivalent figures are 40 percent and 48 percent.

Among Chinese students in China the proportion experiencing distress was marginally lower (6% lower). For the UK and Germany, this finding holds even after we control for the level of study (undergraduate and masters), the month of interview (which takes into account the timing of exams and essay writing) and academic performance. So, just as for home students, Chinese international students get stressed during times of exams and essay writing, and these effects are more pronounced among students whose performance is not as strong.

Looking at population averages is a common practice in epidemiological survey research, and we can also view the distribution of students by categories of distress, as indicated in Figure 12 by quartiles, ranging from the 25 percent who are least distressed to the 25 percent who are most distressed.

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This graphical approach provides the same conclusions as the previous plot in more detail. Chinese students in China are the least distressed: only 20 percent of them report being among the most distressed. In the UK, 29 percent of Chinese students and 29 percent of home students are in this position.

Source: Bright Futures 2018
According to our survey, Chinese students in the UK tend to socialize predominantly with co-nationals. More than half of our survey respondents (54%) said they mostly or only socialized with home country friends, and only seven percent reported that they regularly spent time with non-Chinese (weekly or more). Meanwhile 28 percent reported that making non-Chinese friends was "often/always difficult".

However, our data clearly show that this is not due to a desire of Chinese students to remain in a co-national bubble during their international study, as mentioned above, "meeting different people from different backgrounds" is a key motivation for study abroad. Chinese students do not choose universities based on the number of home country students; the majority of our respondents said this was irrelevant to their choice of study institution (for 49% this was "not at all/slightly important"). Further, Chinese students in the UK live in halls of residence than their peers, with two-thirds of respondents living in such accommodation (as opposed to 22% of UK home students). Such a pattern may be particularly limiting for masters students, who are only in the UK for a short period, and where peers are less likely to be living in university accommodation. Of our masters respondents, 65 percent of Chinese live in halls, but only 15 percent of home students do so.

Adding to this, we find that language difficulties are not clearly related to low levels of cross-national socializing. Overall, 51 percent of UK students say they "never" or "seldom" have issues communicating in English, 36 percent sometimes, and 13 percent do not differ much across students with low and high IELTS scores. We do not find a strong relationship between IELTS score and making non-Chinese friends either; the proportion of Chinese students saying they "often" or "always" have difficulties making friends outside their co-national group ranges from 23 percent for those with the highest IELTS scores and 35 percent for those with the lowest.

More Chinese students in Germany rarely meet friends (once a month or less) than in the UK. This may be due to lower numbers of co-nationals in German universities and possibly difficulties in speaking German (as many programmes are taught in English).

Attitudes in "host societies" are obviously also implicated, although it is difficult to analyse based on our study as we did not ask our control group of home students about their socializing patterns. However, it is notable that 17 percent of Chinese students in the UK and 20 percent in Germany report experiencing discrimination sometimes and two and four percent, respectively, "often or always" and we did not find any clear relation between this experience and difficulties with communicating in English. For the UK, there is anecdotal evidence that international students do face tact everyday racism beyond campus, especially in the context of the UK's "hostile environment" policy.
BACKGROUND ON THE BRIGHT FUTURES STUDY

‘Bright Futures’ is a pioneering study investigating moving for HE of East Asian students—one of the most intense flows of educational migrations. Beginning in 2015, the project is a three-country collaborative project involving four universities (University of Essex, University of Edinburgh, Bielefeld University, and Tsinghua University) funded by the Economic and Social Research Council (UK), German Research Foundation (Germany), and the National Natural Science Foundation (China). This unique research is the first to produce a representative sample survey (with over 7,000 valid respondents) of one of the most important flows of international students globally: from China (the largest sending country) to the UK and Germany (the two most popular destinations for East Asian students in Europe). Our survey draws on three-way comparisons:

- Chinese HE students who move abroad (UK and Germany) for their degrees
- Chinese HE students who remain and study either locally or migrate within China
- UK and German home students and Japanese students who study in the UK and Germany (as control groups)

Such comparisons are very rare but crucial for a comprehensive understanding of international student flows. Our survey provides representative data that allows, for the first time, linking students’ motivations, their prior academic performance and current international education experience, and future life course orientations and prospects. Therefore, the data have the potential to generate unique and robust insights that have not been covered by general surveys such as NSS and those commissioned for marketing purposes.

ABOUT OUR SURVEYS

We designed equivalent questionnaires for Chinese and Japanese international students, Chinese home students in China, and a questionnaire for British and German home students. All questionnaires were in the students’ main language, i.e. Chinese, Japanese, English, or German, respectively.

For our UK survey of Japanese and British students, we obtained a two-stage probability sample. We first sorted (stratified) universities into groups by their ranking and the number of Chinese students enrolled at that institution to ensure that students from different types of universities were proportionately represented. Because of missing information when the sampling of our surveys was defined, universities from Northern Ireland were not included in our sampling frame. Secondly, within each university that agreed to participate we either sampled all Chinese students in undergraduate and masters programmes, or randomly sampled them according to their overall distribution across the UK institutions. In each university, we sampled all Japanese students in undergraduate and masters programmes. For comparison, we sampled the same number of British home students as Chinese students in each university.

In the UK survey, our response rate at the student level was approximately 13 percent for Chinese and home students, and 45 percent for Japanese students. All survey fieldwork took place between April 2017 and April 2018 and our achieved sample size in the UK is 1,317 Chinese students, 290 Japanese students and 1,588 home students.

In parallel, a survey of Chinese, Japanese and German students at German universities (sample size 703 Chinese students, 61 Japanese students and 390 German home students), and a survey of Chinese students (sample size 2,793) in universities in China were conducted, using broadly similar methods adapted to each setting. The total sample size for our study is 7,285, with 65 universities in three countries.

This report focuses primarily on Chinese students in the UK and Germany, with reference to other groups to illustrate points made. We are not including analysis of our data on Japanese students in this report, but will be drawing on this data in future publications.

ENDNOTES

1 For most of the aspects listed above Chinese home students have around five percentage points lower agreement values, with the exception being ‘gaining world class education’ (52%), which is substantially lower than Chinese students in the UK.


3 To measure mental wellbeing, we used the Kessler scale (K6 screening scale of nonspecific psychological distress)—a standard scale widely used in survey research among epidemiologists and psychologists. The K6 asks respondents to rate how often they felt, over the last 30 days: (a) nervous, (b) blue, (c) blue, (d) restless or on edge, (e) that everything was an effort, and (f) worthless. We transformed these items into a scale of mental wellbeing versus mental distress to explore population averages that could help us to estimate the size of group differences.

4 We designed equivalent questionnaires for Chinese and Japanese international students, Chinese home students in China, and a questionnaire for British and German home students.

Figure 15: Survey sample sizes

<table>
<thead>
<tr>
<th></th>
<th>UK</th>
<th>DE</th>
<th>China</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>1,317</td>
<td>709</td>
<td>2,730</td>
<td>4,756</td>
</tr>
<tr>
<td>Japanese</td>
<td>290</td>
<td>61</td>
<td>.</td>
<td>351</td>
</tr>
<tr>
<td>Home</td>
<td>1,588</td>
<td>390</td>
<td>.</td>
<td>1,978</td>
</tr>
<tr>
<td>Total</td>
<td>3,595</td>
<td>1,160</td>
<td>2,730</td>
<td>7,685</td>
</tr>
</tbody>
</table>
A REPORT BY BRIGHT FUTURES

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