Trading Places

How universities have become too reliant on overseas students and how to fix it

Will Tanner

ONWARD

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Summary of the argument

The coronavirus pandemic has exposed the extent to which UK universities depend on international students. Since the introduction of "full cost" tuition fees for overseas students at the start of the 1980s, income from international students has gone from being a niche source of additional funds for the sector, to a core element of university finances.

Overall, the number of overseas students at UK universities has increased sevenfold since 1994/5, making up nearly half (45%) of the growth in the UK student body over that period. For the Russell Group universities, non-UK students now make up the majority (53%) of fee income. Overseas students make up more than 42% of students in business administration and 37% of engineering and technology students in the UK, of which 33% and 30% are domiciled outside the EU.

While the extra funds and international contacts have been welcome, there has never been a debate about the potential consequences of this huge change to our university system.

First, and most obviously, dependence on international student income creates financial fragility for the sector. A sharp decline in overseas students in the coming academic year poses major risks for the sector with staff already being laid off as a result. Smaller universities may become unviable without income from overseas students. It is possible that several universities will go bust, disrupting the education of tens of thousands of young people at a time when the labour market offers few alternatives.

The most prestigious universities have the largest proportion of students from overseas, and are most exposed to the fall-off in overseas demand. Because of the way research-intensive universities use overseas income to subsidise research funding, the crisis will inevitably threaten UK scientific endeavour at exactly the time we need it most. The sector is now seeking further support from the taxpayer to replace lost income.

Second, as well as dependence on overseas income overall, risk is further concentrated because universities' are so dependent on a single country for so many students - China.

In the last year for which data is available, 2018/19, there were 120,385 China-domiciled students at UK universities. This is a 34% increase in just five years, up from 89,540 in 2014/15. The number of full-time students from China at UK universities was greater than the number from the South West, or Yorkshire and the Humber, or the East Midlands, or Wales, the North East or Northern Ireland.

At the postgraduate level, China is an even more significant source of student numbers and university income. 20% of postgraduates at UK universities were from China in 2018/19. For every two and a half postgraduates at UK universities who were UK based, one was from China. There are 16 universities (mainly Russell Group) for whom Chinese students alone make up more than a fifth of total fee income.

This concentration raises a number of concerns. First, there are well-founded fears that the Chinese Communist Party (CCP) or organisations that it controls have sought – in some cases successfully- to undermine academic freedom and the integrity of scientific research on UK campuses.

Further, we have already seen the CCP using the financial dependence of universities in other countries like Australia, to try to exert political influence. As for any business with a single dominant customer, concentration creates risk: if the event that the Chinese government tries to exert leverage over the UK by discouraging students from coming here (as it has in Australia) UK universities will find they are more exposed than they would be if their international intake was more diversified.

Third, the post-18 education funding system is built on opaque cross-subsidies, with the transfer from international fees to research one of the most important. This opacity is something which has emerged organically rather than ever being consciously decided on by any government. The net result is that a large share of UK research funding is dependent on decisions taken by students and governments around the world, rather than by UK institutions or policymakers.

Making university finances less transparent has important consequences: it is concerning that a number of universities went into the crisis with significant debts and/or weak underlying reserves. As this paper shows, there is also a clear correlation between overseas student numbers and vice-chancellor and senior staff pay inflation within the sector.

Fourth and finally, the growth of overseas students has displaced UK students at a number of the UK's most prestigious institutions. Because overseas students can be charged far higher fees, universities have powerful incentives to grow the number of overseas students.

Particularly among the most research intensive and most prestigious institutions, a number of universities have seen the number of UK students falling or stagnating because of displacement by more lucrative overseas students.

For all these reasons, this paper argues that UK universities have become too reliant on overseas students from one dominant source. This is a consequence of the view – held for a quarter of a century across all parties – that exporting higher education has no downsides and could continue indefinitely. The coronavirus has exposed the risks of such an approach, while growing geopolitical risks should also give ministers pause.

Recommendations

We recommend that ministers consider five broad reforms to the way the sector treats students and funding from overseas, in order to build resilience:

First, in the short term, ministers should plug the gap in UK research funding generated by the drop-off in overseas students in the next academic year. Such is the reliance on overseas students for income that UK science could lose £1 billion in reduced funding next year without intervention. Without it, ministers are unlikely to meet their own commitments to spend 2.4% of GDP on research and development by 2027. There is therefore a strong case for an additional £1 billion investment in university-led R&D in the 2020-21 academic year.

Second, to make it more attractive for universities to expand high value courses for UK students, ministers could consider introducing higher levels of taxpayer support for high value-added courses through increased teaching grants. This might see courses such as physical sciences, medicine, or engineering attracting higher levels of teaching grant, as proposed by the Augar Review. These commitments would be paid for by the reducing numbers on low value courses which absorb the most taxpayer subsidy, for example through numerical caps, tying student loan availability to course earnings potential, or in other ways.

Third, universities' ability to recruit overseas students above a certain level and charge unlimited fees should be made contingent on growing the number of UK students. This would tend to affect higher tariff institutions where the financial risk from overseas students is greater and where there has been more evidence of displacement of UK students. This could be done by simply preventing institutions from growing overseas places faster than domestic places to prevent crowding out. Another option would be to prevent institutions who expand international places at the expense of UK students from accessing the new post-study work visa announced this month.

Fourth, to avoid the risks to academic independence that come with heavy dependence on a single country, ministers should monitor and consider capping the proportion of income which a university can generate from a single country. Such a cap could cover either only fee income, or also include corporate income. This will require much more transparent data than currently exists through HESA, the university statistics agency. HESA should publish regular data on the level of income generated by domicile at both a course and institutional level, to allow direct comparison.

Fifth, ministers should urgently introduce a reporting requirement on universities to declare all non-UK research funding and contracts over £250,000 a year, and publish a detailed summary of every institution's foreign funding broken down by country of origin and the nature of the partnership. This would mirror Section 117 of the US Higher Education Act which forces universities to declare all foreign funding. The UK currently has no such requirement and it is possible that many universities do not know whether foreign governments or corporations are funding research at their institutions.

Challenges

Over the last 40 years, the UK higher education system has undergone a quiet revolution.

Since the early 1980s successive governments have radically expanded the number of overseas students at British institutions. In 1999, Prime Minister Tony Blair set a target of an additional 50,000 overseas places by 2002 to generate £500 million in fees. [1]This policy was continued by his successors, with Prime Ministers of all parties routinely praising higher education as a "great British export" and treating the expansion of overseas places as an unqualified good.

This was well-intentioned and up to a point made good sense. Ministers saw an opportunity to both attract the "brightest and best" minds from overseas and generate revenue in order to subsidise the expansion of higher education for domestic students and supplement the UK's comparatively low rates of R&D funding. And there is no doubt that the increase in overseas students has been beneficial to higher education and UK universities routinely rank highly in international institutional rankings.

But the pace and scale of expansion has had unintended consequences that are only now becoming visible and which are likely to worsen in the coming years. Having overextended itself into international markets, the sector may now face a period of painful contraction and reform as it comes to terms with the new normal.

1. Universities have become excessively reliant on overseas students for income over the last 25 years

The number of overseas students travelling to the UK to study at our universities has risen more than sevenfold in the last twenty-five years. There are now nearly 460,000 internationally domiciled students at UK higher education institutions, up from just 65,000 in 1994/5.[2]

This rate of growth far exceeds the growth in the number of domestic students over the same period. Since 1994/5, the number of UK-domiciled students has increased by only 50 per cent. In total, overseas students made up nearly 45 per cent of all additional student places created since 1994/5, despite this being a period of unprecedented growth in domestic places.

This rate of growth has slowed in the last decade but is still considerable. Since the introduction of higher domestic tuition fees just under a decade ago, the number of full-time international students has risen at twice the pace (25.4%) of domestic places (12.8%), and by 92,000 in total.

Before the pandemic, in 2019, the Office for Students expected this trend to continue, with full-time overseas places rising by a further 56,000 over the next four years. This 21% increase compared to a projected 8% for UK and EU students.

This is unsurprising, given the price premium that overseas places command. Institutions can charge significantly more by expanding to international student audiences than for UK students. In 2020, home and EU students will pay fees of £9,250 in 2020. Students from outside the EU at UK universities will pay between £10,000 and £38,000 depending on the course and institution.

In 2018/19, higher education institutions generated over £18.7 billion in tuition fee income, around a third of which, £6.9 billion, came from overseas students. Of this, the majority, around £5.8 billion, comes from students domiciled outside the EU.

Table 1: Change in full-time students by domicile, 1994/5 to 2018/19

Source: HESA, Students in Higher Education, 2010-11 to 2018-19 and Machin and Murphy (2013), Paying Out and Crowding Out? The Globalisation of Higher Education, LSE[3]

	1994/5	2010/11	2018/19	Change 1994/5 to 2018/19	Change 2010-11 to 2018-19
UK	993,000	1,312,295	1,481,345	49.18%	12.88%
Non-UK	64,600	365,045	457,890	609%	25.43%
Total	1,057,600	1.677,340	1,939,240	83%	15.61%

This income stream has been severely disrupted by the pandemic. Last year, the Office for Students predicted that overseas students would bring in additional fee income of £1.7 billion over the next four years, or 37.9 per cent of additional fee income for universities over the period. [4]Instead, it is likely that overseas places will generate substantially less than in previous years – and potentially for some years to come.

2. Overseas reliance is particularly acute for the most prestigious institutions and courses

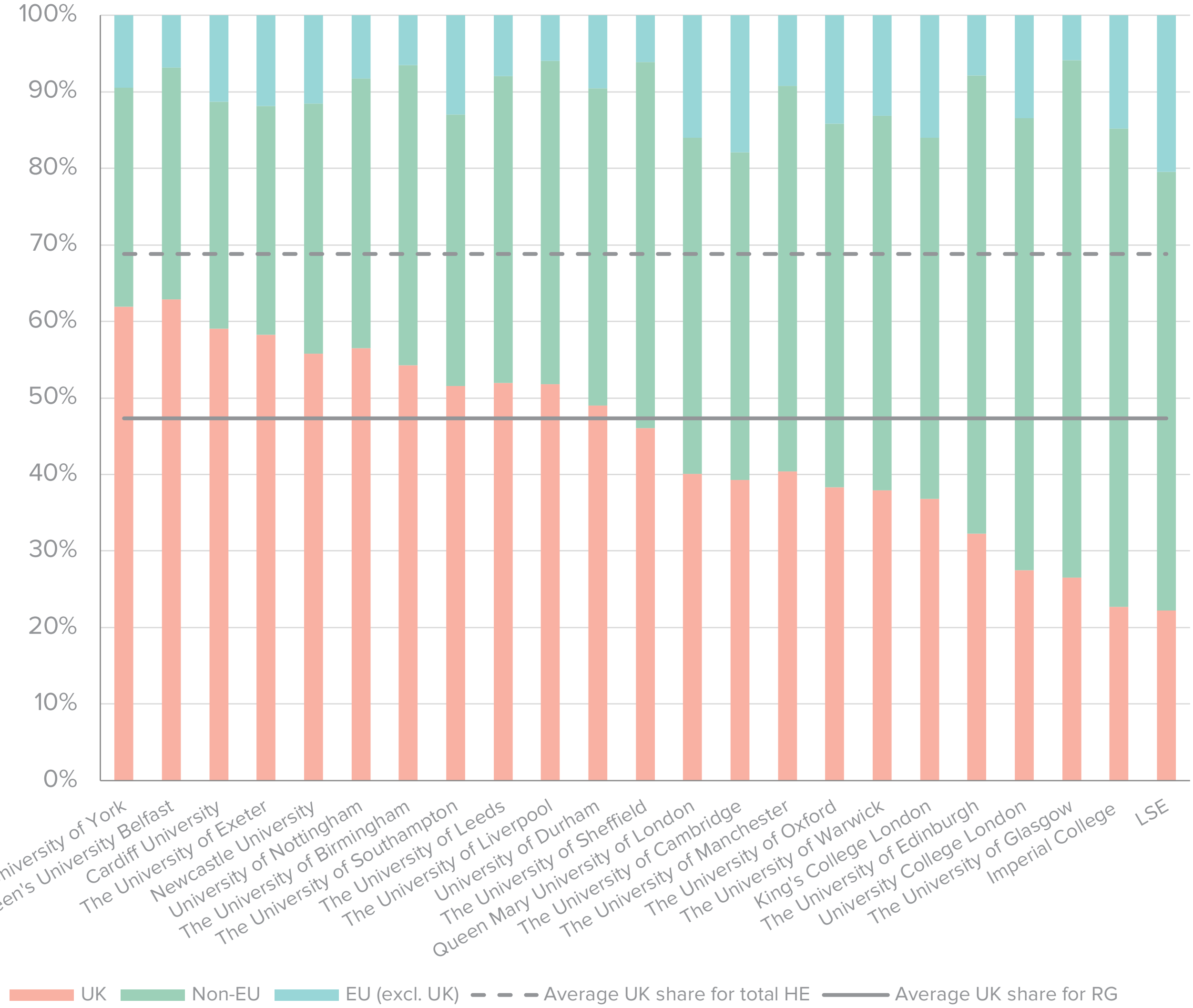
These risks are greatest for the most prestigious and research-intensive universities, which have tended to use fee income from overseas students to subsidise domestic scientific research.

- Of the £5.8 billion of non-EU income to UK universities last year, £3.2 billion goes to the prestigious Russell Group of universities. Of this, £1.4 billion is from students domiciled in China, equivalent to two thirds (67%) of the £2.1 billion of income from China-domiciled students to the UK as a whole.

- The average university receives 69% of fee income from domestic students and 31% from non-UK students, and of this 31%, the great majority of non-UK income (24% of total income) is from students from non-EU countries. This balance is likely to change, with the forthcoming introduction of overseas fees for EU students. For the Russell Group, non-UK students make up the majority (53%) of fee income, of which 46% comes from non-EU sources. This varies considerably by institution, from 31% non-EU at the University of York to 69% non-EU at the University of Glasgow.

- There were 23 higher education institutions in the UK that relied on international students for more than half of their total tuition fee income in 2018/19. Of these, 10 of the 17 UK universities ranked in the QS World University Rankings 2020. All but one of these 17 institutions rely on overseas students for more than 40 per cent of their annual fee income, including Glasgow, St Andrews, Imperial College, Edinburgh, UCL, LSE, Manchester, Warwick, Oxford, London, Sheffield, Durham, Leeds, Birmingham, Southampton, Bristol. The 17th (Nottingham) relied on overseas income for 37% of fee revenue. [5]

Figure 1: Share of fees, by domicile, at the Russell Group of universities



At a subject level, there is wide variation in terms of overseas student participation reflecting the attractiveness of such courses to foreign markets. For example, non-EU students make up more than a third (33%) of all students in business administration and 3 in 10 (30%) engineering and technology students in the UK. This compares to 5% of education, 7% of historical and philosophical studies and 8% of creative arts students. When EU students are included, non-UK students as a whole make up 42% of business administration and 37% of engineering and technology students, compared to 10% of education, 14% of historical and philosophical studies and 21% of creative arts students.

This means that overseas students are generally better represented in the subject areas that have the greatest level of individual economic returns, and UK students are better represented in the areas with the lowest returns to taxpayers and graduates, perhaps reflecting the increased fees for overseas students.

- In the decade since 2010/11, courses have seen the share of places going to overseas students rise disproportionately compared to UK students, reflecting the faster pace of change described earlier. Since 2010, the average increase enrolment in UK students across all subject areas is 9%, compared to 23% for non-EU students.

- No subject area has seen an increase in UK students of more than 27% over the period, while three subject areas have seen increases of non-EU students of two thirds or more: Mass communications and documentation (69%), Veterinary Sciences (68%) and Biological Sciences (67%). Two areas have seen non-EU students fall as a share of total student cohort: computer science (-6%) and languages (-5%).

The disproportionate growth of overseas students at the best institutions and on the most competitive courses creates perverse outcomes. As previous Onward research shows, the growth of international students at Oxford and Cambridge has been matched with a decline in the number of state school pupils winning places at these institutions. Between 2014/15 and 2018/19 the number of UK students fell at Oxford, Cambridge, Imperial, UCL, LSE, Bath and Manchester, and flatlined at KCL and Durham.

Similarly, during a period since 2010/11 where the UK has experienced a severe shortage of doctors and nurses, the number of UK-domiciled medical students has risen by only 850 (2%) while the number from overseas rose 1,785 (29%). The same is true of education: the number of UK students has fallen by 7,770 (-9%), compared to a 2,435 (54%) increase from overseas.

Figure 2: Share of full-time student places, by domicile and subject area, 2018-19

Source: HESA

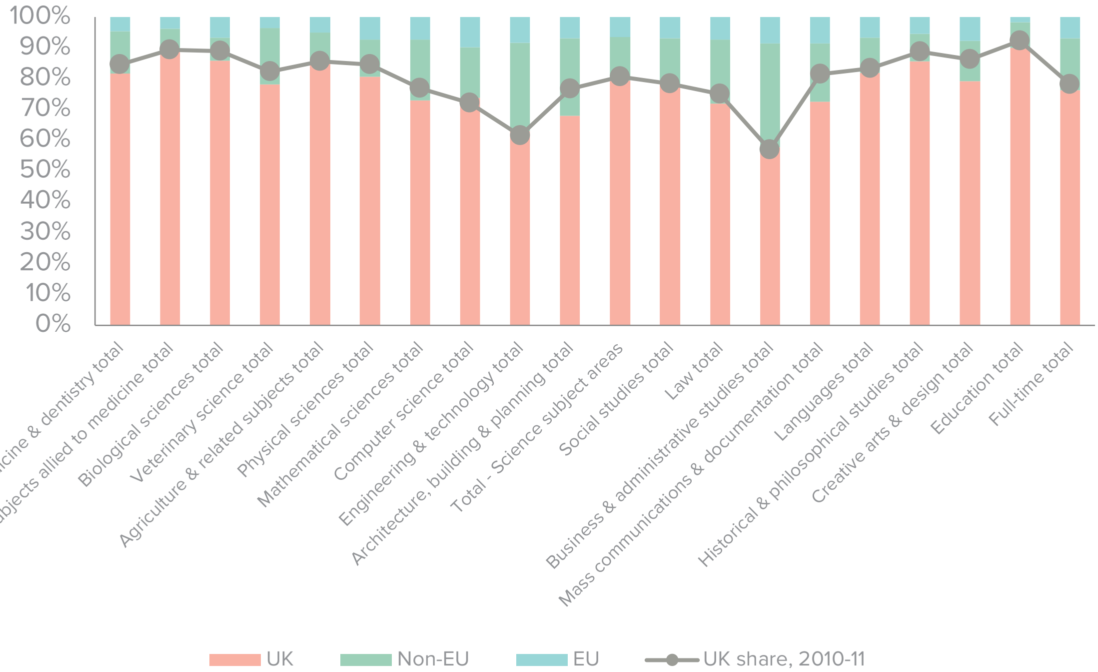
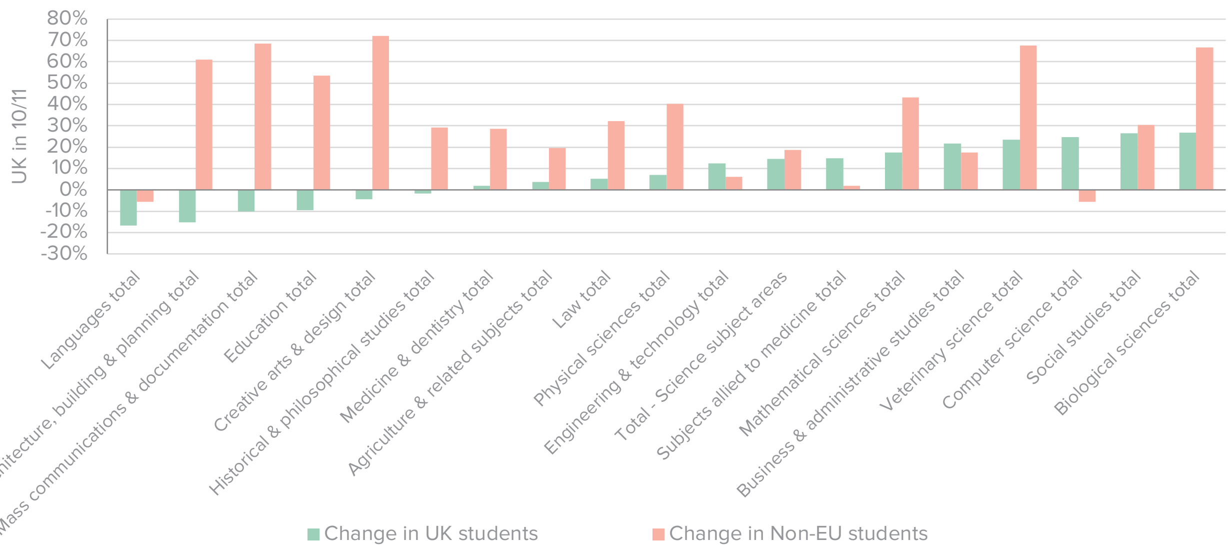


Figure 3: Change in UK students, by domicile and subject, 2010-11 to 2018-19

Source: HESA



3. Students from China dominate overseas student admissions

Of course, overseas students are not distributed equally and international admissions to UK institutions have come to be dominated by students from a single country: China. This is not surprising given the emergence of a large Chinese middle class and the growing integration of China into the world economy.

In the last year for which data is available, 2018/19, there were 120,385 China-domiciled students at UK universities. This is a 34% increase in just five years, up from 89,540 in 2014/15. Over the period since 2006/07, the number of China-domiciled students has more than tripled in absolute terms and doubled as a share of non-UK first year students, from 16% to 32%. This does not include 14,520 students from Hong Kong and 3,510 students from Taiwan in 2018/19, which have remained broadly stable over the period (14,635 and 3,420 respectively).

The number of China-domiciled students exceeds that from the next largest contributing country, India (26,685), by a ratio of four to one. It is nearly ten times the number from Italy (13,965), Malaysia (13,835), France (13,675), or Germany (13,475), the next four largest countries by domicile last year excluding Hong Kong.
In total, there are nearly twice as many students from China at UK universities as from other members of the G7 (70,415) and more around a fifth more than from non-UK Commonwealth countries put together (100,455).[6]

Figure 4: First year non-UK students by domicile, 2006/07 to 2018/19

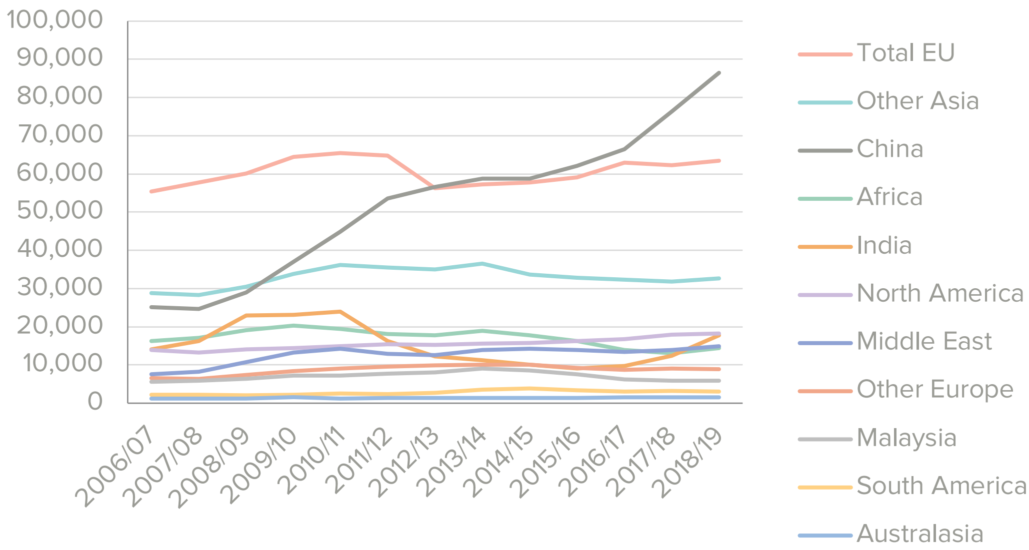


Table 2: Overseas students by domicile, 2018/19

Source: HESA (2018/19)

	Total, 2014/15	Total, 2018/19	Full-time, 2014/15	Full-time, 2018-19	% change, Total	% change, full-time
China	89,540	120,385	84,710	115,435	36%	34%
G7 Total	62,315	70,415	52,735	62,180	13%	18%
United States	16,865	20,120	13,610	17,040	19%	25%
Canada	6,075	6,490	5,275	5,815	7%	10%
Japan	3,210	2,690	2,845	2,475	-16%	-13%
Italy	10,525	13,965	9,365	12,825	33%	37%
France	11,965	13,675	10,205	12,605	14%	24%
Germany	13,675	13,475	11,435	11,420	-1%	0%
Commonwealth	105,690	100,455	94,285	92,330	-5%	-2%

The growth in students from China far exceeds the growth in the number of students from any UK region or other international markets. Since the mid-1990's, the number of full-time Chinese students studying in Britain increased 75 times over, from 1,510 to 115,435.

At the postgraduate level China is even more significant. 20% of postgraduates at UK universities were from China in 2018/19. For every two and a half postgraduates at UK universities who were UK based, one was from China.

The growth in students from China far exceeds the growth in the number of students from any UK region or other international markets:

- Between 2014/15 and 2018/19, the number of students from UK regions rose by 11% on average, and ranged from 5% from the South West and North West to 19% from London. Over the same four year period, the number from China increased by 36%. This is double the rate of increase seen from the G7 (18%) and considerably more than the Commonwealth, for whom numbers fell marginally over the period.

- As a result, China-domiciled full-time students now account for a greater number of UK university places than students from half of UK regions. In 2018/19, the number of full-time students from China at UK universities was 115,435, more than the numbers of full-time enrolments from the South West (102,475), Yorkshire and the Humber (97,820), East Midlands (92,020), Wales (68,915), North East (53,920) or Northern Ireland (47,105). When part-time students are included, China fills more places at UK universities than Wales, Northern Ireland, North East or the East Midlands.

Figure 5: Percentage growth in students by domicile, 2014/15 to 2018/19

Source: Onward analysis, HESA data

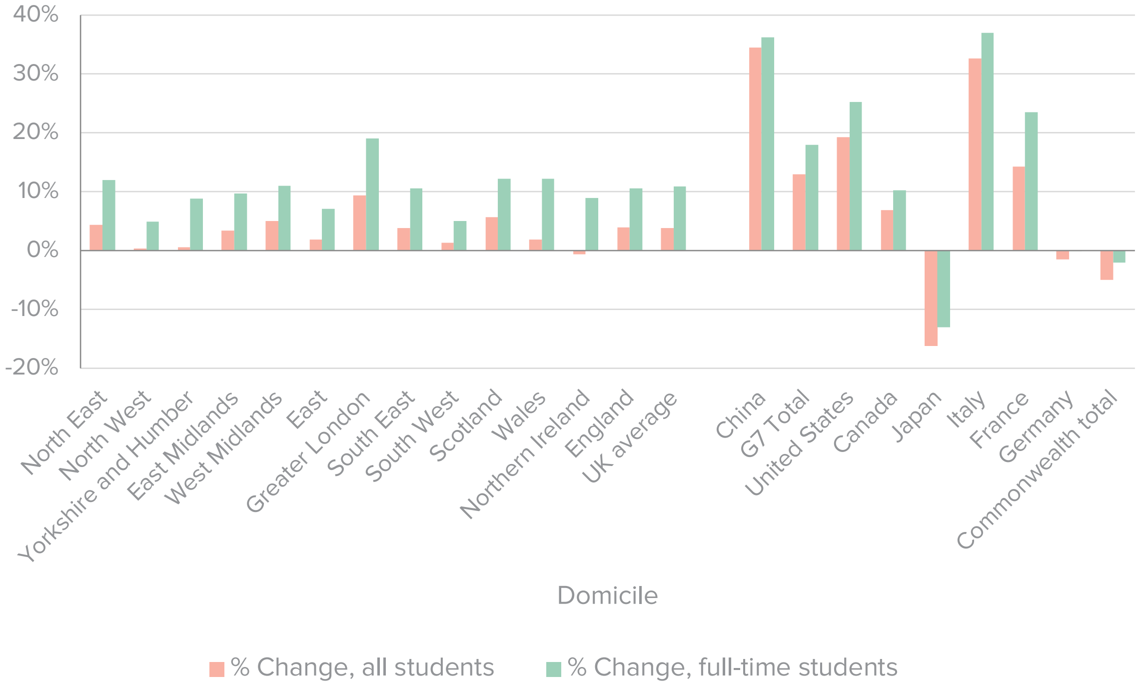
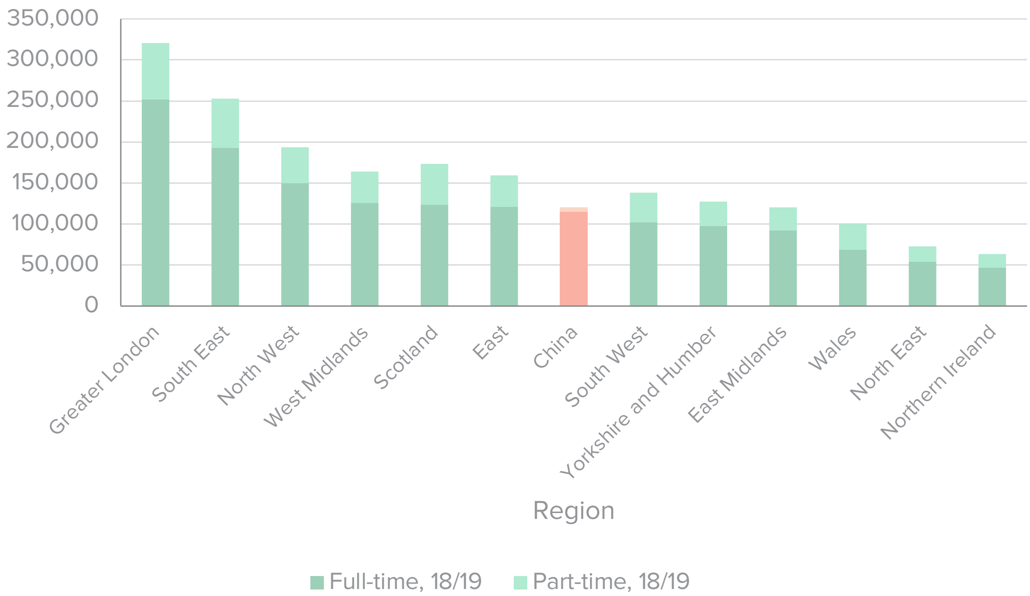


Figure 6: Regional domicile of students at UK universities, in 2018/19

Source: HESA



This numerical growth naturally feeds through into growing levels of financial reliance on China-domiciled students. While HESA data does not break down fee income by domicile (see recommendations), Onward analysis of student numbers estimates that:

- Total fee income from Chinese students attending UK universities in 2018/19 was £2.1 billion. This is more than 36% of all non-EU student income and 11% of all higher education fee income last year.

- This varies considerably by institution. We estimate that the average university makes 7% of their total fee income from China-domiciled students and nearly half of universities for which data is available (87) rely on Chinese students for less than 5% of their annual fee income. However, this long tail obscures a small number of institutions for whom Chinese student income makes up a large proportion of their income.

- There are 16 institutions for whom Chinese students make up more than a fifth of total fee income. Of these, the vast majority (12) are from the Russell Group of research-intensive universities.

- Ten universities receive more than a quarter of their fee income from Chinese-domiciled students, including: the Royal College of Art (37%), University of Glasgow, University of Liverpool and University of Sheffield (28%), Heriot-Watt University (28%), Glasgow School of Art (27%), Imperial College (26%), UCL (26%), University of Manchester (26%) and the University of the Arts London (25%).

Figure 7: Estimated share of university income from China-domiciled students, Russell Group universities, 2018-19

Source: Onward analysis of HESA data

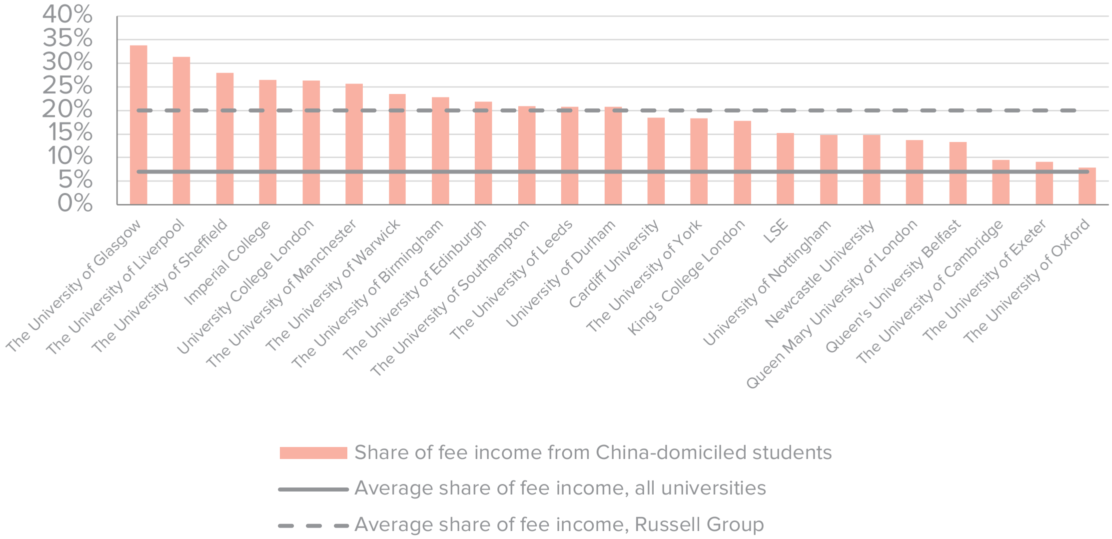
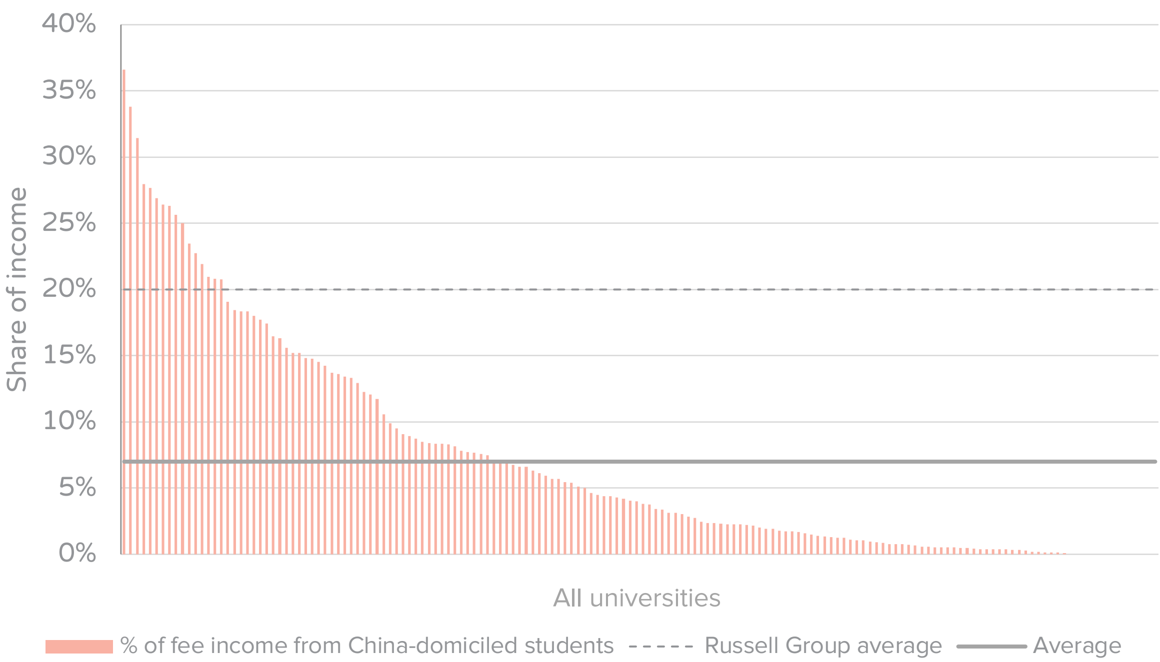


Figure 8: Share of university income from China-domiciled students, 2018-19

Source: Onward analysis of HESA data



4. Universities' reliance on China increasingly looks unsustainable in the short and long-term

The short-term disruption of the coronavirus pandemic and the longer-term tension building between China and the West throws this relationship into sharp relief, raising questions about the sustainability of the current funding model of higher education.

In the short-term, the risk is that students from overseas cancel their studies, creating a considerable funding gap for the sector:

- Surveys conducted by the British Council indicate that 29% of overseas students from East Asia are expecting to delay or cancel their plans to study in the UK, including 46% of undergraduate applicants.[7]

- In April, a survey of Chinese students in particular found that 22% expected to cancel their study plans and 39% were undecided, while just 27% were unlikely to cancel. [8]An estimated 40% of those coming from China – the UK's biggest source of overseas students – have yet to decide whether they will study in the UK this year. [9]

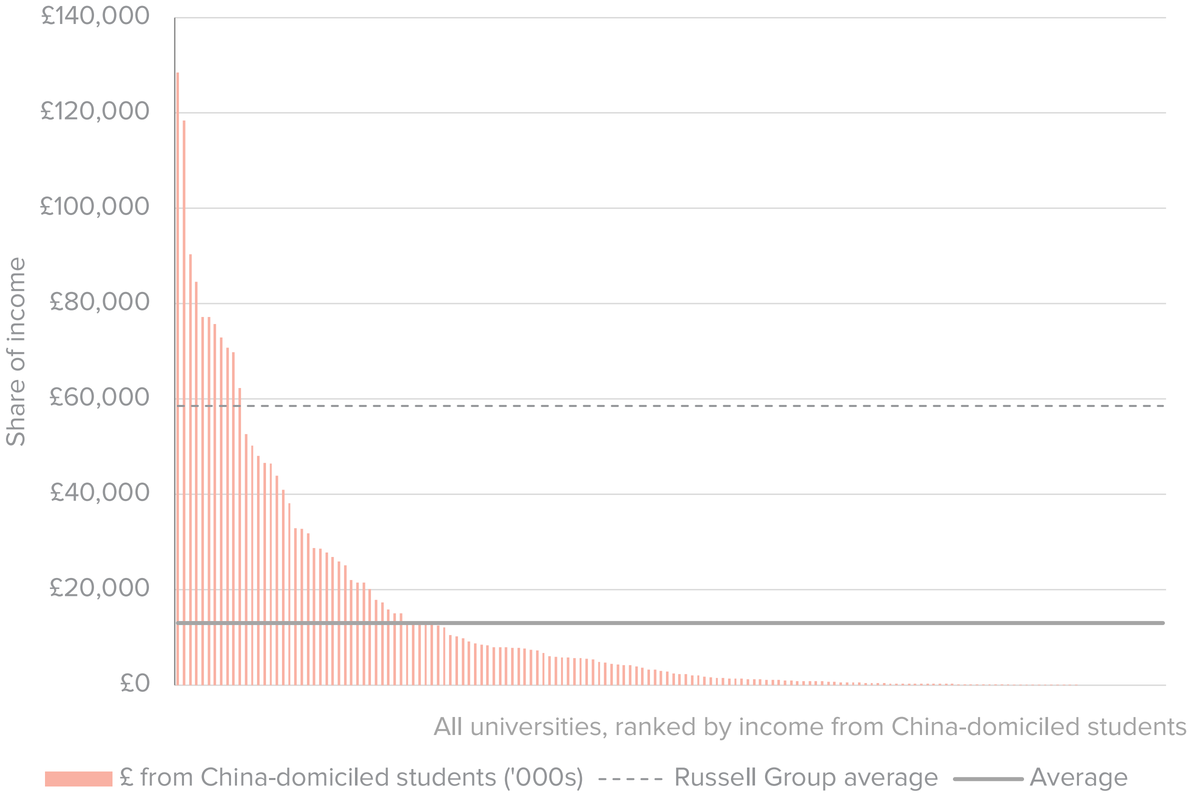
- Universities themselves estimate that this will create a £2 billion shortfall in their finances and have asked the Government for a bailout.[10]

The financial impact of 60% of Chinese students not taking up their places would be significant. Across all universities, this would represent a £1.25 billion shortfall, which at best could only be partially made up through domestic students.

In such a scenario, the financial losses would likely be concentrated at a small number of the best universities, including UCL (£128 million a year from China-domiciled students), University of Manchester (£118 million), the University of Liverpool (£90 million), Sheffield (£85 million) and Birmingham (£77 million). In total, Russell Group universities would lose an estimated £844 million on 2018-19 figures, making it the biggest single risk to the sustainability of UK scientific research.

Figure 9: Estimated income from China-domiciled students by university, 2018-19

Source: Onward analysis of HESA data



In the longer-term, the risk is that universities become financially reliant on the beneficence of a foreign state whose interests are not always aligned to those of UK institutions.

The experience of Australia, whose university system is even more reliant on overseas student income from China than UK universities, is instructive.

- In 2017, the Chinese Embassy in Canberra warned Chinese students about the safety risks of studying in Australia, pointing to violence against students and "insulting incidents". While the warnings came after an assault on a Chinese student, numerous commentators pointed to the passage of legislation designed to curb alleged Chinese espionage.[11]

- Amid global pressure for an international investigation into the origins of coronavirus in April, China's ambassador to Australia, Cheng Jingye, warned Australia of a boycott of its universities if the country continued "teaming up with…forces in Washington to launch a kind of political campaign against China". In a veiled threat, he told the Australian Financial Review, "people would think, why should we go to such a country that is not friendly to China?"[12]

- In June, the Chinese Education Ministry issued a warning to Chinese students to avoid studying in Australia due to "discriminatory incidents against Asians" during the pandemic. It followed heightened geopolitical tensions between the two countries over exports and security issues.

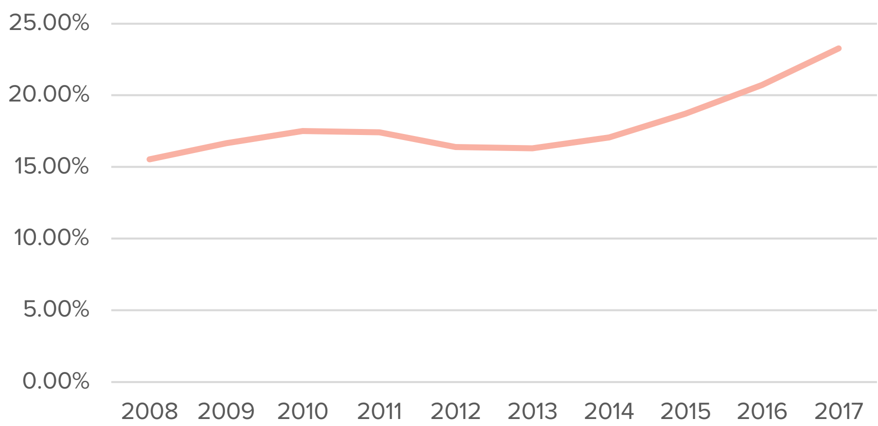
- It is reported that Beijing has already barred Chinese mainlanders from starting tertiary courses in Taiwan, on the basis of the "current relationship between the two sides of the Taiwan Strait" alongside public health restrictions relating to the virus.[13]

Case Study 1: Australia

In the late 1980s, the Australian government sought to expand higher education through the Higher Education Contribution System (HECS). The system introduced domestic fees but supplemented these with international student places. This is one of the reasons that government subsidies for higher education is less that 40% of total funding,[14] well below the OECD average for public investment in tertiary education.[15]

Figure 10. Overseas revenue in Australian universities as a percentage of total revenue

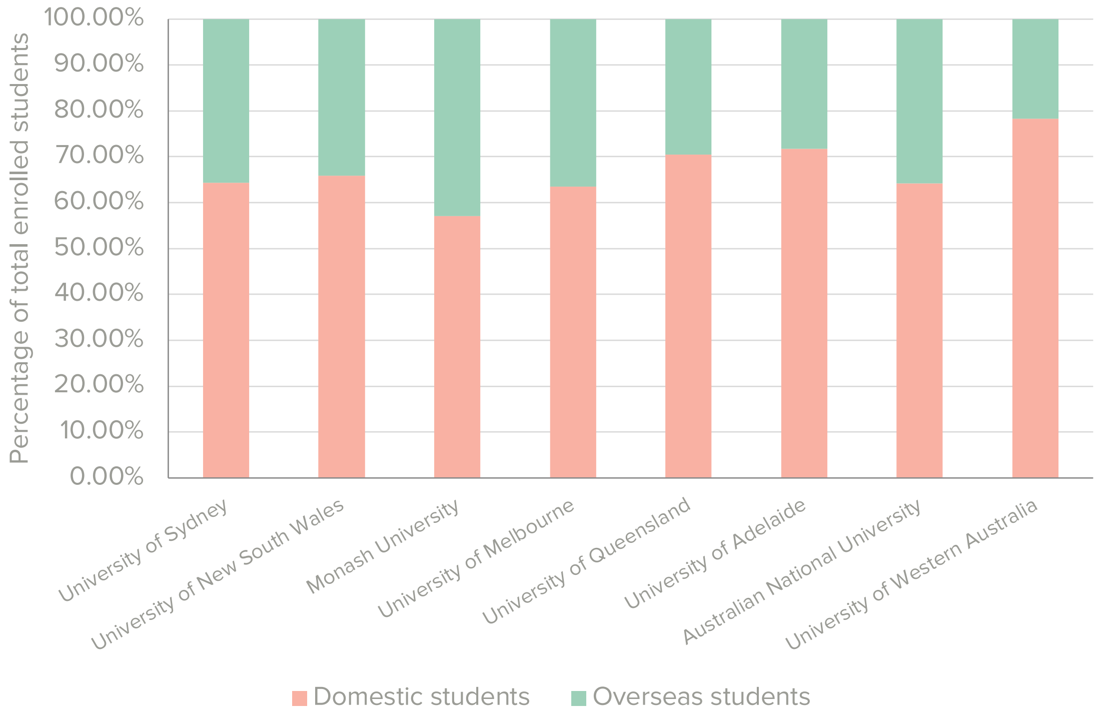
Source: Department of Education, Skills and Employment, Australian Government



The number of international students has been steadily growing over the last forty years. At Australia's top universities, referred to as the Group of 8 (Go8), the number of international student enrolments has grown at twice the rate of domestic student enrolments. Across these 8 universities, international students make up between 20-40% of the whole university cohort.[16]

Figure 11. Percentage of domestic and international students at Australia's top higher education institutions, 2017.

Source: Department of Education, Skills and Employment, Australian Government



The latest figures from the Australian Bureau of Statistics show that, in 2017–18, international education was worth A$32.4 billion to the Australian economy, up from A$28.1 billion in 2016–17. [17]In the last decade, Australian higher education has experienced an 6% compound annual growth, well in advance of inflation or GDP growth. However when one considers the increase in student enrolment during this time the net worth on a per student basis has not kept up. The Equivalent Full Time Student Load (EFTSL), [18]which is a metric used to measure the amount of learning a student has undertaken shows that for international students the EFTSL has risen 51% between 2008 and 2017 compared to 37% for domestic students.[19]

Australian institutions have suffered from the pandemic. Reports indicate that the Australian higher education sector will lose approximately A$3-4.6 billion in revenue in 2020. This number is expected to increase in 2021. [20]This may be compounded by the fact that university staff are not currently eligible for the government wage subsidy scheme, JobKeeper.[21]

5. There is a strong relationship between vice-chancellor pay inflation and overseas income

The university sector has been criticised for the growth of vice-chancellor pay in recent years, which has often appeared unrelated to performance. In fact, previous Onward research has demonstrated the relationship between vice-chancellor pay and the awarding of “conditional unconditional” offers by universities. [22]

There is a strong relationship between senior staff pay at universities and their levels of overseas students, suggesting that pay inflation has been a consequence of the international growth of higher education. The relationship is weaker for vice-chancellor pay than for the number of highly-paid staff at institutions, where there is a strong relationship for all overseas students and for China-domiciled student numbers.

Figure 12: Latest Non-EU domiciled student intake against vice-chancellor total remuneration

Source: Onward analysis of HESA data

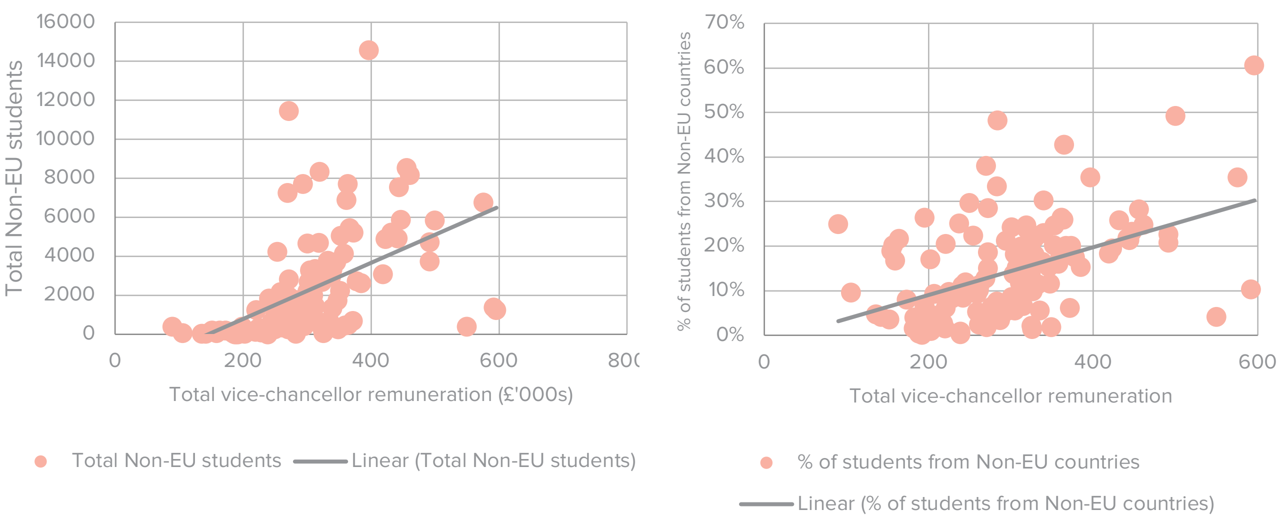
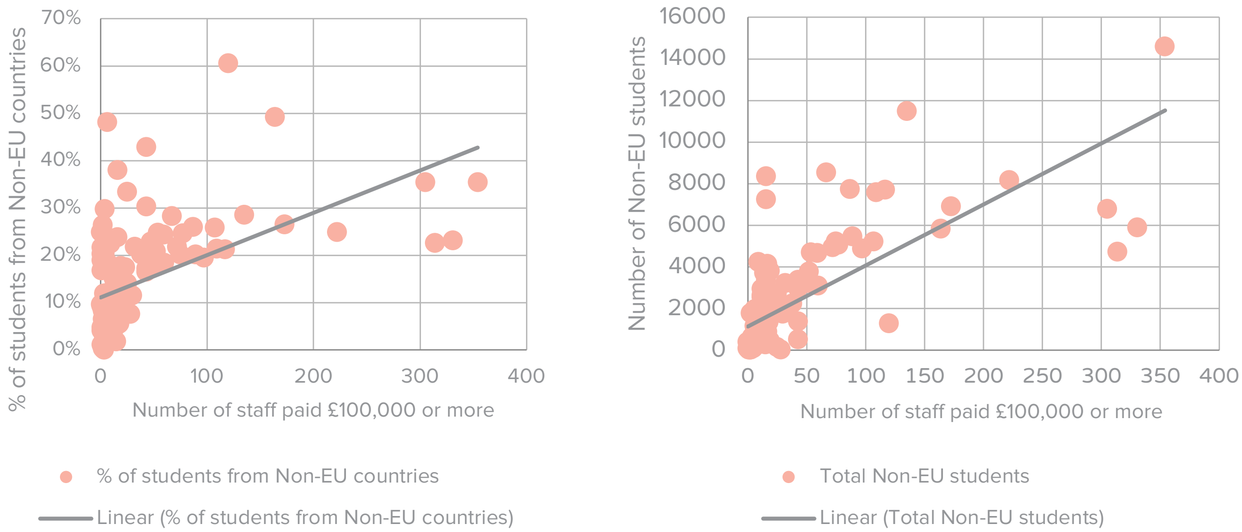


Figure 13: Latest Non-EU domiciled student intake against number of staff paid more than £100,000

Source: Onward analysis of HESA data



A similar, albeit weaker, relationship exists when senior pay is compared to the number and proportion of China-domiciled students at different universities. This is unsurprising given the way Chinese students dominate overseas places.

Figure 14: Latest China-domiciled student intake against vice-chancellor total remuneration

Source: Onward analysis of HESA data

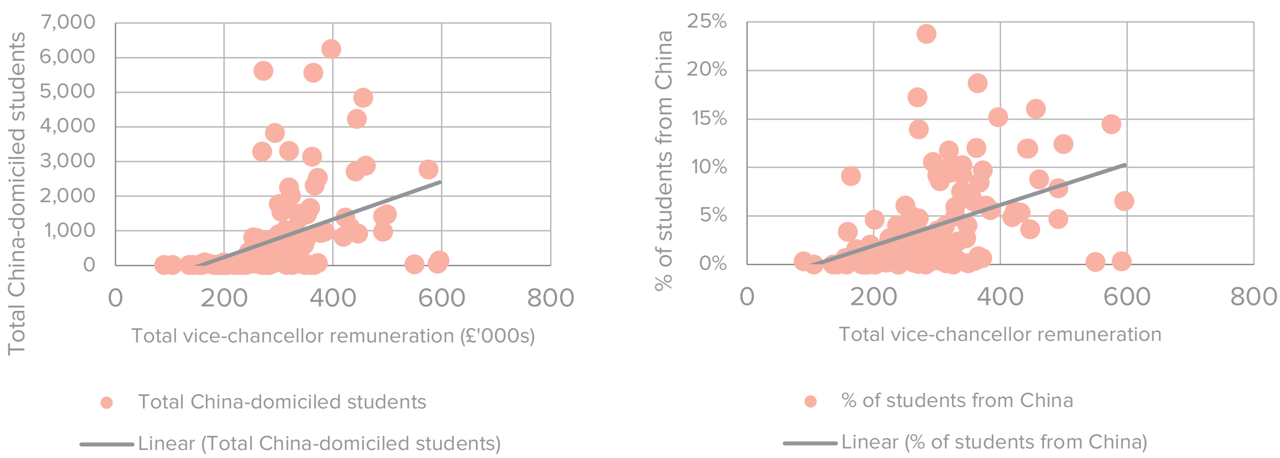
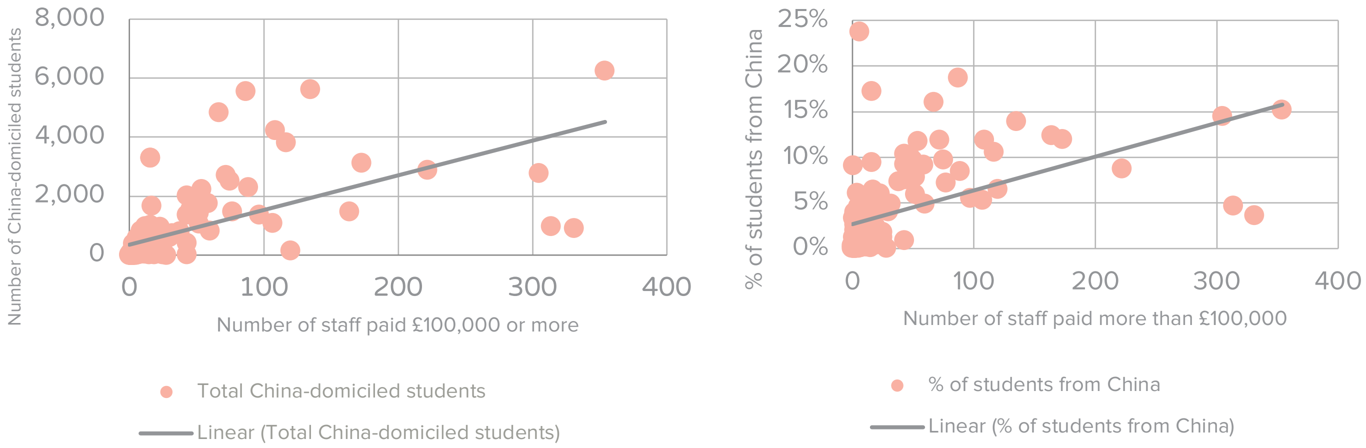


Figure 15: Latest China-domiciled student intake against number of staff paid more than £100,000

Source: Onward analysis of HESA data



6. There is growing evidence of state-funded activities on campuses with large Chinese intakes

The growth of overseas students in recent years has coincided with rising fears about malign commercial and cultural influence on UK campuses, particularly but not exclusively linked to the Chinese state.

For example, last year, the Foreign Select Committee heard numerous instances of influence exercised by foreign state actors at UK universities[23], including allegations that:

- The pro-vice chancellor at one Russell Group university stood down a speaker from an event after being contacted by the Chinese Embassy.

- The vice-chancellor being put under pressure by the Chinese Embassy to prevent a senior academic from making political comments about China during a specified time.

- Managers at the University of Nottingham pressuring academics to cancel events relating to Tibet and Taiwan after complaints from Chinese officials.

- Officials from Confucius Institutes, which are funded by the Chinese state, confiscating papers which mention Taiwan at an academic conference.

- The Chinese Students and Scholars Association (CSSA), an organisation supported and partly financed by the Chinese Government, reporting on students' activities to the Chinese Embassy and trying to stop discussion of topics sensitive to China under guidance of the embassy.

There have also been instances of pro-democracy sentiment relating to Hong Kong and Taiwan being undermined on UK universities:

- In April 2019, the London School of Economics considered removing Taiwan from a prominent piece of artwork in response to criticism from China. After an outcry from Taiwanese students, the university placed an asterisk next to Taiwan to designate the country's "disputed borders".[24]

- In October, a group of pro-Hong Kong protestors were forced to take refuge in a lecture theatre at Sheffield University after being attacked by a counter-demonstration on behalf of Chinese control.[25]

- In November, Chinese students voted down a motion at Warwick University that expressed solidarity with Hong Kong, after the Chinese Society issued a tutorial on how to vote against it. [26]The motion called on the university to "support Hong Kong's movement and protect freedom of expression on campus".[27]

There have been further allegations about the commercial and technological influence of Chinese state-backed firms and universities on British campuses:

- The Australian Strategic Policy Institute (ASPI) identified 16 university labs around the world with significant investment of control from Chinese defence firms, of which 10 are based in the UK. Manchester and Imperial College London host 6 of these 10.[28]

- The Chinese telecoms company Huawei, which is registered as a high-risk vendor by GCHQ and currently subject to legal action in the United States, has contributed financially to 17 scientific papers led by UK university partnerships with Chinese institutions, raising some concerns of intellectual property theft or industrial espionage.[29]

- Jesus College, Cambridge, has been criticised for accepting £155,000 in funding from Huawei and £200,000 from a Chinese state-funded agency to support its China Centre and the UK-China Global Issues Dialogue Centre. This coincided with favourable assessments of Huawei in the College’s global communications white paper.[30]

These issues are compounded by the lack of transparency around academic funding and monitoring of foreign activity on campuses. For example, the University of Bristol has refused to reveal the amount of funding received by Professor Martin Kuball, the principal investigator of a five-year project researching a next-generation internet [31]. An FOI response by the university said that revealing the funding would “would damage our relationship with Huawei and with other companies who provide similar funding, which could lead to them withdrawing it and hamper the ability to win future research funds.” Jesus College only revealed the level of funding by Huawei after an FOI request.

UK universities currently rely on self-declaration of funding by academics to ethics committees, rather than a formal system for transparency. As a result, it is impossible to know the extent of foreign state funding of UK academia. In the US, an ongoing investigation by the National Institutes of Health into the grantee's disclosure of financial ties to foreign governments led to 54 academics being fired or resigning. In more than 9 out of 10 cases (93%), the undisclosed funding came from a Chinese institution.[32]

Solutions

For several decades, politicians of all parties have believed that exporting higher education has no downsides and should continue indefinitely. In that time, overseas funding has gone from a niche source of income to a major influence on the sustainability and credibility of some of the UK's most prestigious institutions. We have never had a serious conversation about the benefits and trade-offs of this approach for how our universities operate.

Now is an opportune moment to have this debate. Post-18 education funding has been under review for the last three years, following the establishment of the Augar Review in 2017. The pandemic creates enormous challenges for the sector which creates a burning platform for change. It is also highly likely that the UK's geopolitical interests will evolve in the coming years, giving rising tensions with China and a changing global outlook as Britain seeks trade deals around the world.

The last chapter identified four key risks that have emerged as universities have expanded the number of overseas places in recent years.

- First, dependence on overseas students creates financial fragility in the sector.
- Second, risk is further concentrated because universities' are so dependent on a single country for so many students - China.
- Third, the post-18 education funding system is built on opaque cross-subsidies, meaning a considerable proportion of UK research funding relies upon the goodwill of foreign countries and custom of their citizens.
- Fourth, the expansion of UK universities has crowded out places for domestic students at some of the best universities and on the highest value courses.

To respond to these risks, we recommend that ministers consider five broad reforms to the way the sector treats students and funding from overseas, in order to build resilience.

1. Plug the £1 billion research deficit created by the shortfall in international students

The most visible sign of fragility will be felt in the coming academic year when a large number of enrolled overseas students are forecast to stay at home.

Estimates vary but it is reasonable to expect that between a third and three quarters of international students will decide against or be unable to take up their places in the UK this year. Given overseas students represented £6.9 billion of fee income last year, of which around £1.2 billion was surplus, this would create a funding gap of between £420 million and £960 billion.[33] The vast majority of this deficit will accumulate at the most research-intensive and internationally competitive universities, several of whom are already overextended on debt to finance rapid expansion.

There is a risk that a shortfall in non-EU students feeds through into lower funding for UK research at the moment the UK economy is most in need of innovation, slowing the recovery and making it much more difficult for the Government to reach its 2.4% R&D target by 2027. Even if every current place was filled by UK and EU students, universities would still have a considerable funding gap given these students generate a small average deficit per place. International students, by contrast, produce an average surplus per place of £5,100 each, of which £4,000 on average goes to research.[34]

The Government should plug this £1 billion gap in 2020/21 directly. There is a strong case for doing this now - at a point when academic research is needed more than ever. Without it, it is likely that ministers will miss their commitment to increase R&D spending to 2.4% of GDP by 2027 and more thereafter. Increasing research funding this year would have an added advantage of removing the opaque cross-subsidy between overseas students and research and laying the foundations for future reform.

Research funding through the subject based Research Councils and through Higher Education Funding Councils via QR (Quality Related) funding is allocated on the basis of research excellence, as measured by the Research Excellence Framework, and should therefore more closely follow research impact. However, as Onward has previously written, the effect of the existing research funding framework is to skew public funding towards the "golden triangle" of London, Oxford and Cambridge. In 2017, £2.7 billion was spent on R&D by Government and Higher Education institutions in the north and midlands, an area home to 26 million people. But £5.2 billion was spent in the greater south east - London, the South East and East – also an area with 26 million people. [35]

The additional funding could be introduced with conditions that it should be allocated in a way that better reflected the desire to level up regional growth and with greater incentives for translational research via business partnerships or government labs, as is more common in other countries, and which could contribute heavily to the recovery.

2. Make high-value courses more attractive to UK students with higher teaching grants

The Augar Review proposed reducing the cost of student loans to £7,500 and reintroducing the teaching grant to offer higher levels of taxpayer support to higher-cost subjects, such as medicine, engineering and physical sciences. The rationale was that the cost of delivering traditionally lower-cost subjects, such as creative arts and humanities, had increased at a higher rate than the cost of delivering higher-cost subjects, suggesting that the £9,250 fee cap has had an inflationary effect on spending in the lower-cost subjects.

At the same time, Long-term Educational Outcomes (LEO) data has exposed the limited average returns to both students and taxpayers from some lower cost subjects and at some universities. Previous Onward research found that a tenth (9.8 per cent) of undergraduates will earn less than £25,000, on average, ten years after they graduate, according to median earnings for their subject. This represents 134,000 students each year who won't be paying back anything even ten years after they leave.

Graduates studying medicine, law, economics and the hard sciences ("STEM subjects") enjoy high returns. Lower earning courses included degrees in creative arts, psychology, agriculture, combined studies, mass communications, English and social studies (excluding economics). Many of these lower value subjects have the highest volumes of domestic students, while higher value courses have seen the greatest increases in overseas admission, sometimes squeezing out domestic places.

Australia has recently overhauled the taxpayer subsidy available to different courses, in order to fund 39,000 new places for domestic students on courses with higher economic returns by 2023. Under the proposals, the government contribution to humanities, society and culture, communications, law and commerce degrees will fall considerably but the government will increase the level of subsidy for maths by 62%, teaching, nursing, clinical psychology and languages by 46%, and science, health, IT and engineering by 20%, saving students $18,000, $9,300 and $6,300 respectively.

We recommend that the Government adopt the Augar Review recommendation of higher teaching grants for higher-value courses, such as physical sciences, medicine, or engineering. This would remove some or all of the premium for overseas students in these subjects and therefore encourage domestic recruitment in these subjects. It would also encourage universities to increase places on the highest value courses, benefiting students who might otherwise be studying a lower value degree.

However this will need to be paid for. Alongside, ministers should actively reduce the number of places on low value courses, which absorb the most taxpayer subsidy but deliver the worst earnings for graduates. The Institute for Fiscal Studies estimates that up one in five students, or 70,000 students a year, do not earn enough over their lifetimes to justify the costs of going to university and 34% of recent graduates are in non-graduate jobs.

This could be achieved in a number of ways. The original Browne Review recommended introducing a grade floor for student loans. Ministers could introduce a numerical cap on low-value courses, allowing for some culturally important courses, such as prestigious creative arts courses, but halting the expansion of lower value courses more generally. Another option would be to link student loan eligibility to earnings potential, in effect removing the taxpayer subsidy for courses that do not deliver a decent economic return.

3. Only allow universities to expand overseas places, charge high fees or offer post-study work visas if they grow the number of UK students

At many of the UK's most prestigious or research-intensive universities, the growth of overseas places has significantly outpaced that of domestic students, especially on courses with the greatest earnings premium. Several institutions, including Oxford and Cambridge, have reduced the number of UK state school students to accommodate rising numbers of students from overseas. This is unsustainable.

We recommend that ministers make universities' ability to recruit overseas students above a certain level and charge unlimited fees contingent on growing the number of UK students. This would tend to affect higher tariff institutions who have expanded more aggressively overseas and where there has been more evidence of displacement of UK students. Given higher education exports are expected to continue to grow in the coming years, notwithstanding the pandemic, this should reduce crowding out and lead to a growing number of places at the most competitive universities for UK school-leavers.

There are several ways to achieve this. The simplest way would be to require UK higher education universities to ensure that overseas students did not increase at a faster rate than UK students, a restriction which would not affect the vast majority of universities. This could be enforced by removing institutions' ability to recruit from overseas or removing their ability to charge the highest fees for domestic students. Ministers also recently announced that the new two-year post-study work visa will only be available to students graduating from certain institutions. While this should also be made contingent on quality, it could also be conditional on universities increasing places for UK students.

4. Diversify the overseas intake by capping the number of students a university can recruit from a single country

As discussed earlier, overseas recruitment has become increasingly focused on a single country. This has numerous consequences on campus life, academic independence and foreign relations. Other countries, such as Canada, are actively seeking to diversify their overseas student intake. The UK should follow suit.

We recommend that ministers should introduce a cap on the number of students a university can recruit from any single country. This would avoid targeting any specific country and could be set at a relatively high level, but would nevertheless reduce the dependency of some countries on a single foreign state.

This measure is unlikely to affect a large number of universities. For example, a cap set at 30% of non-UK students would only have affected around 29 institutions in 2018/19. However some universities would have to rapidly change their intake: last year 68% of non-UK students at the University of Liverpool, and 48% of students at Cardiff, York and Sheffield, were from China.

A better measure would cap the level of income a university could generate from a single country. Such a cap could cover either only fee income, or also include corporate income. This will require much more transparent data than currently exists through HESA, the university statistics agency. To achieve this, HESA should publish regular data on the level of income generated by domicile at both a course and institutional level, and broken down by fee, sponsorship and overseas research funding income.

5. Introduce stringent transparency requirements for all non-UK funding of academic research

There is a clear and urgent need for greater transparency and assurance over financial support for UK academics or research projects at UK universities. The current system of self-regulation through ethics panels is inadequate given the levels of funding and nature of organisations, such as global technology firms, often funding research.

We recommend that ministers urgently introduce a reporting requirement on universities to declare all non-UK research funding and contracts over £250,000 a year, and publish a detailed summary of every institution's foreign funding broken down by country of origin and the nature of the partnership.

This could be declared to the Department for Education or UKRI as a condition of a university's eligibility for domestic research funding. For full transparency, we recommend that each university also publishes a breakdown of overseas contracts or funding, by country of origin and type of partnership, on an annual basis.

This would mirror Section 117 of the US Higher Education Act, under which institutions of higher education are not excluded from accepting overseas funding or engaging in contracts with foreign governments, companies, or agents, but they are required to disclose transparently any such gifts or contracts that amount, individually or combined, to more than $250,000 in a calendar year.

The UK currently has no such requirement and it is possible that many universities do not know whether foreign governments or corporations are funding research at their institutions.

Conclusion

For many years, the growth of overseas students has been seen as entirely benign: as Germany has sold cars, the UK has exported higher education. There is no doubt that overseas students have brought valuable funds and international expertise to the UK. But the trade-offs - for domestic students and for academic independence - have crystallised as the sector's financial dependency has grown.

The steps we set out in this paper will increase resilience without throwing the baby out with the bathwater. They seek to ensure that the future growth of international students does not happen at the expense of UK students. They would start to reduce the opaque cross-subsidies that currently undermine our research efforts at a time when they are dearly needed.

Importantly, these steps reduce dependency on any one country, which creates risks for institutional autonomy and the credibility of scientific research, and introduce greater transparency of funding from overseas. This will ensure that not only policymakers but also vice-chancellors are able to hold institutions to account for their relationships with companies and foreign states.

As a result, UK universities would not only be more resilient at home, but more attractive overseas.

Annex

Table 3: Change in full-time students at UK universities by domicile

Source: HESA

Region	Full-time, 14/15	Full-time, 18/19	Change, Full-time	% Change, Full-time
North East	48,130	53,920	5,790	12%
North West	143,135	150,170	7,035	5%
Yorkshire and Humber	89,925	97,820	7,895	9%
East Midlands	83,880	92,020	8,140	10%
West Midlands	113,395	125,855	12,460	11%
East	112,860	120,845	7,985	7%
Greater London	211,680	251,940	40,260	19%
South East	174,775	193,160	18,385	11%
South West	97,550	102,475	4,925	5%
Scotland	109,795	123,245	13,450	12%
Wales	61,415	68,915	7,500	12%
Northern Ireland	43,220	47,105	3,885	9%
England	1,077,405	1,191,680	114,275	11%
Total UK	1,293,280	1,434,475	141,195	11%
China	84,710	115,435	30,725	36%
G7 Total	52,735	62,180	9,445	18%
United States	13,610	17,040	3,430	25%
Canada	5,275	5,815	540	10%
Japan	2,845	2,475	-370	-13%
Italy	9,365	12,825	3,460	37%
France	10,205	12,605	2,400	24%
Germany	11,435	11,420	-15	0%
Commonwealth total	94,285	92,330	-1,955	-2%

Endnotes

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