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The benefits and costs of international higher education students to the UK economy

Presentation of findings

London Economics, May 2023

Background and context

We were commissioned by HEPI, UUKi and Kaplan to estimate the **economic benefits and public costs to the UK economy associated with international higher education (HE) students studying at UK higher education institutions (HEIs)**. This is the third iteration of this study, focusing on the **cohort of international students who started HE qualifications in the UK in 2021-22**. Similar to the previous iterations, we estimated the following:

ECONOMIC BENEFITS

- **Tuition fee income** from international students studying in the UK, and additional **indirect and induced economic effects** throughout the UK economy from universities' spending of this fee income on staff, goods, and services;
- **Income from non-fee (i.e. living cost) expenditure of international students**, and additional **indirect and induced effects**; and
- **Visitor income from friends and families** visiting international students in the UK, and additional indirect and induced effects throughout the economy.

PUBLIC PURSE COSTS

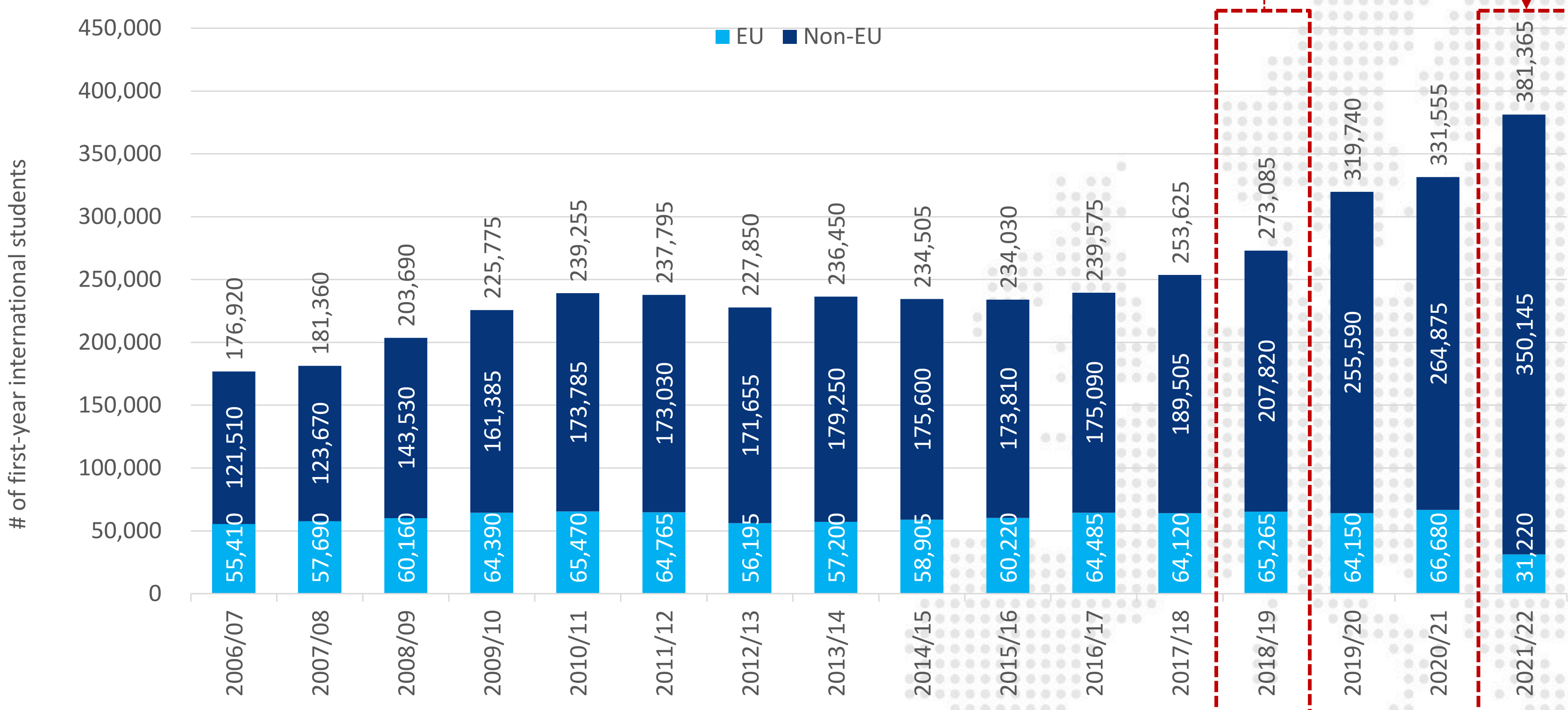
- Costs of **provision of public services to international students or their dependants** (e.g. healthcare (net of any Immigration Health Surcharge); housing; or costs of education for students' dependent children)[1].
- Costs associated with **EU students** that were previously included but that are no longer applicable post-Brexit[2]:
  - Costs associated with **public tuition fee support** provided to EU students
  - **Teaching grants** for EU students paid to HEIs by the HE Funding Councils

Overview of the 2021-22 cohort of international students

The 2021-22 cohort of international students

- The previous iteration was based on a total of approximately **273,000** first-year international students starting HE qualifications in the UK in 2018-19. The number of international first-year students has increased by **40%** since then, to **381,000** in 2021-22 – an increase of **108,000** students.
- This increase was **entirely driven by a 68% increase in the number of non-EU students** (**142,000** students). In contrast, the number of EU domiciled students has *declined* by **34,000** students (**52%**) since 2018-19, due to a large decline in 2021-22 (being the first academic year from which post-Brexit rules applied).

# of international first-year students enrolled in UK HE, 2006-07 to 2021-22

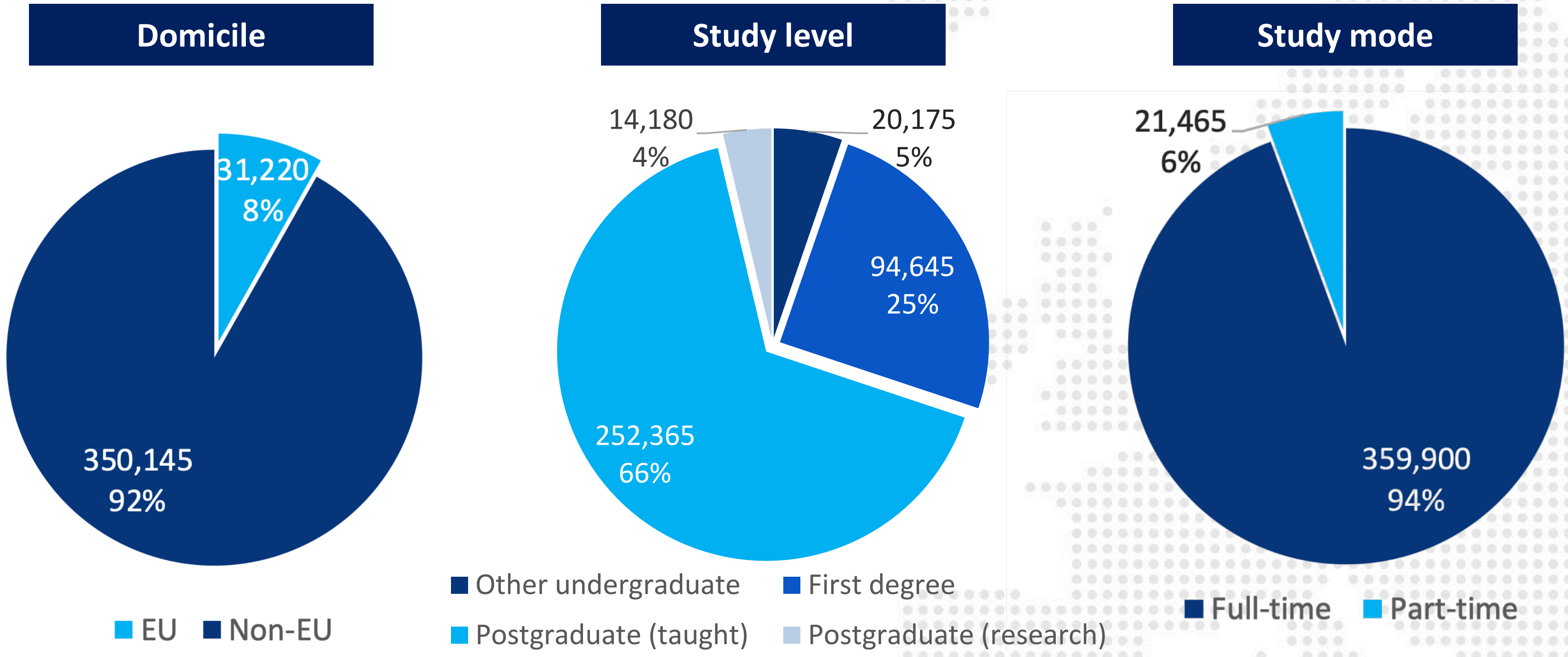


 Source: Higher Education Statistics Agency (here). Note: All student numbers are rounded to the nearest 5.

The 2021-22 cohort of international students

The analysis is based on the **381,365 international students *commencing* HE studies in the UK in 2021-22**, and estimates the benefits and costs associated with these students **over the entire duration of their study in the UK** (adjusted for completion rates).

# of international first-year students enrolled in UK HE in 2021-22



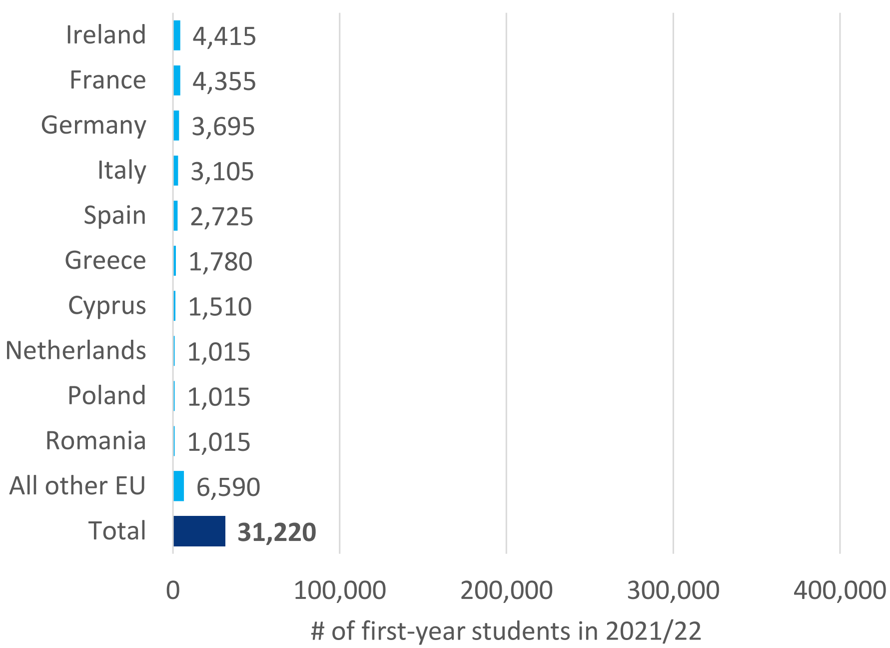
Source: Higher Education Statistics Agency (here)
Note: All numbers are rounded to the nearest 5. Numbers may be slightly different from the total number of first-year international students published by HESA, due to this rounding (as the charts are based on summing granular rounded data from HESA, rather than using the rounded overall totals).

The 2021-22 cohort of international students

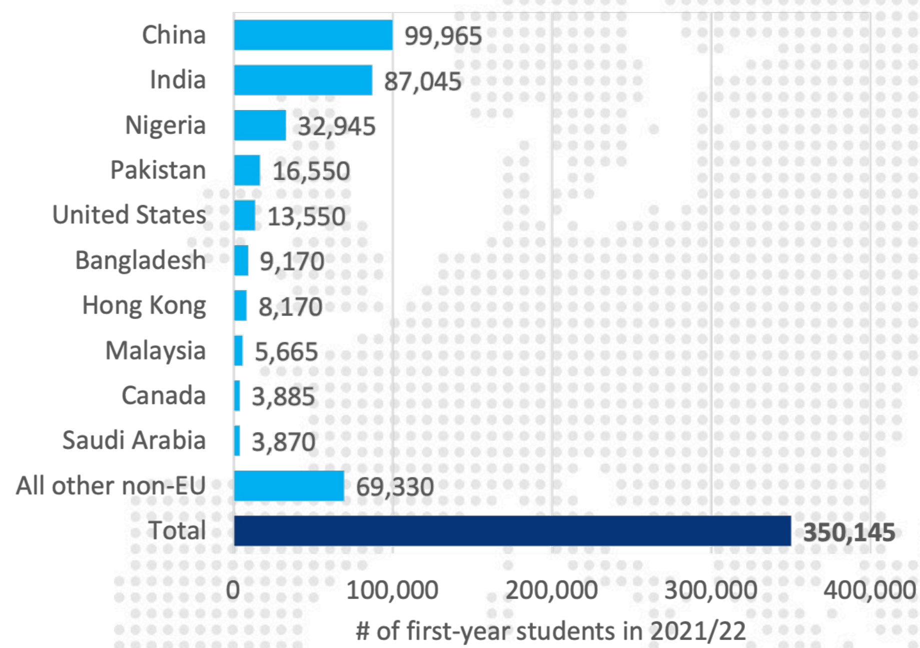
- As in 2018-19, most non-EU students in the 2021-22 cohort were from **China** (**99,965 students**). However, students from **India** and **Nigeria** have grown at a much faster pace than students from China (both in absolute and relative terms). The number of students from **India** in the 2021-22 cohort stood at **87,045**, while the number of students from **Nigeria** was **32,945**.
- There has been a **substantial decline in the number of students in the cohort from almost all major EU contributor countries** (except **Ireland**, which has remained roughly constant compared to 2018-19, and which is now the main EU contributor).

# of international first-year students enrolled in UK HE in 2021-22

Top 10 EU countries of domicile



Top 10 non-EU countries of domicile

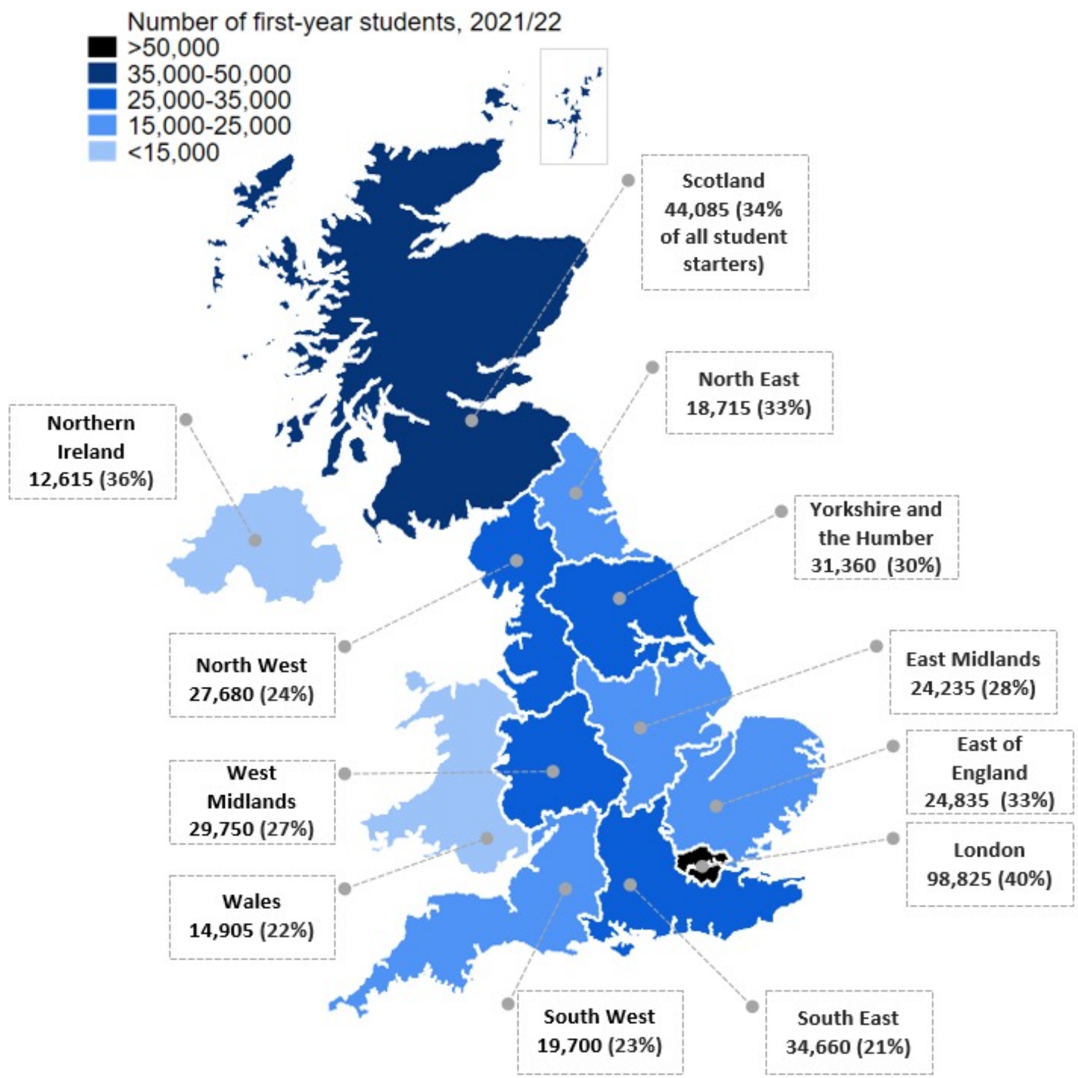


Source: Higher Education Statistics Agency (here). Note: All student numbers are rounded to the nearest 5.

The 2021-22 cohort of international students

- As in 2018-19, international students in the 2021-22 cohort were **spread across the entire United Kingdom** (and the distribution by region has remained roughly the same) – and all regions have seen large increases in the number of inbound international first-year students.
- The majority of students were enrolled in **England** (**309,760** students, **81%**), with **98,825** students enrolled at HEIs in **London** (corresponding to **40%** of the starting cohort), with a further **34,660** enrolled in the **South East**, **31,360** enrolled in **Yorkshire and the Humber**, and **29,750** in the **West Midlands**.
- Outside of England, there were **44,085** students attending HEIs in **Scotland** (**34%** of the starting cohort), **14,905** enrolled in **Wales**, and **12,615** enrolled in **Northern Ireland**.

# of international first-year students enrolled in UK HE in 2021-22, and proportion of entire starting cohort, by region of study



Source: Higher Education Statistics Agency (here). Note: All student numbers are rounded to the nearest 5.

Aggregate benefits, costs, and net impact associated with the cohort

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Economic benefits from international students

Type of impact	£ per student			Total benefits, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Fee income	£76,000	£58,000	**£59,000**	£2.4bn	£20.2bn	**£22.6bn**
Non-fee income	£59,000	£48,000	**£49,000**	£1.8bn	£16.7bn	**£18.6bn**
Visitor income	£3,000	£2,000	**£2,000**	£0.1bn	£0.6bn	**£0.7bn**
Total benefits	**£137,000**	**£107,000**	**£110,000**	**£4.3bn**	**£37.6bn**	**£41.9bn**

Note: All estimates are presented in 2021-22 prices, and discounted to net present values. Estimates per student are rounded to the nearest £1,000, and aggregate estimates are rounded to the nearest £0.1bn. Estimates might not add up to total due to rounding. Averages are weighted by the number of students in the 2021-22 cohort (across all levels and by study mode). All benefits include both the **direct** impact of each type of income, as well as the associated economic **knock-on** (i.e. **indirect** and **induced**) **effects** generated from the additional supply chain and employee wage income.

- The total benefit to the UK economy per **EU domiciled student** was approximately **£137,000**, with the comparable estimate for **non-EU domiciled students** standing at **£107,000**, primarily driven by the fact that EU students are more likely to undertake (longer) first degrees rather than (shorter) Masters degrees[3].

- **Aggregating** across the entire 2021-22 cohort, the total benefit of international students to the UK economy was estimated at **£41.9bn** (with **£37.6bn** generated by non-EU students, and **£4.3bn** generated by EU students)[4].

Public costs of international students

Type of cost	£ per student			Total costs, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Teaching grants	-	-	-	-	-	-
Student support	-	-	-	-	-	-
Other public costs	£13,000	£12,000	**£12,000**	£0.4bn	£4.0bn	**£4.4bn**
Total costs	**£13,000**	**£12,000**	**£12,000**	**£0.4bn**	**£4.0bn**	**£4.4bn**

Note: All estimates are presented in 2021-22 prices, and discounted to net present values. Estimates per student are rounded to the nearest £1,000, and aggregate estimates are rounded to the nearest £0.1bn. Estimates might not add up to total due to rounding. Averages are weighted by the number of students in the 2021-22 cohort (across all levels and by study mode).

- The Exchequer cost per **EU domiciled student** was estimated at **£13,000**, while the comparable figure for **non-EU students** was estimated at **£12,000**. The slightly higher costs per EU student are again driven by the **higher average duration** of study among EU students (due to more EU students undertaking first degrees). This outweighs the fact that non-EU students have a relatively higher likelihood of bringing in dependants than EU students[5].
- **Aggregating** across the cohort, the total public cost of international students stands at **£4.4bn** (**£4.0bn** associated with non-EU students, and **£0.4bn** associated with EU students). This now *only* relates to the costs of providing general public services for students and their dependants (e.g. in terms of health services, or education provision for child dependants).

Net economic impact of international students

Type of impact	£ per student			Net impact, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Economic benefits	£137,000	£107,000	**£110,000**	£4.3bn	£37.6bn	**£41.9bn**
Public costs	£13,000	£12,000	**£12,000**	£0.4bn	£4.0bn	**£4.4bn**
Net impact	**£125,000**	**£96,000**	**£98,000**	**£3.9bn**	**£33.5bn**	**£37.4bn**

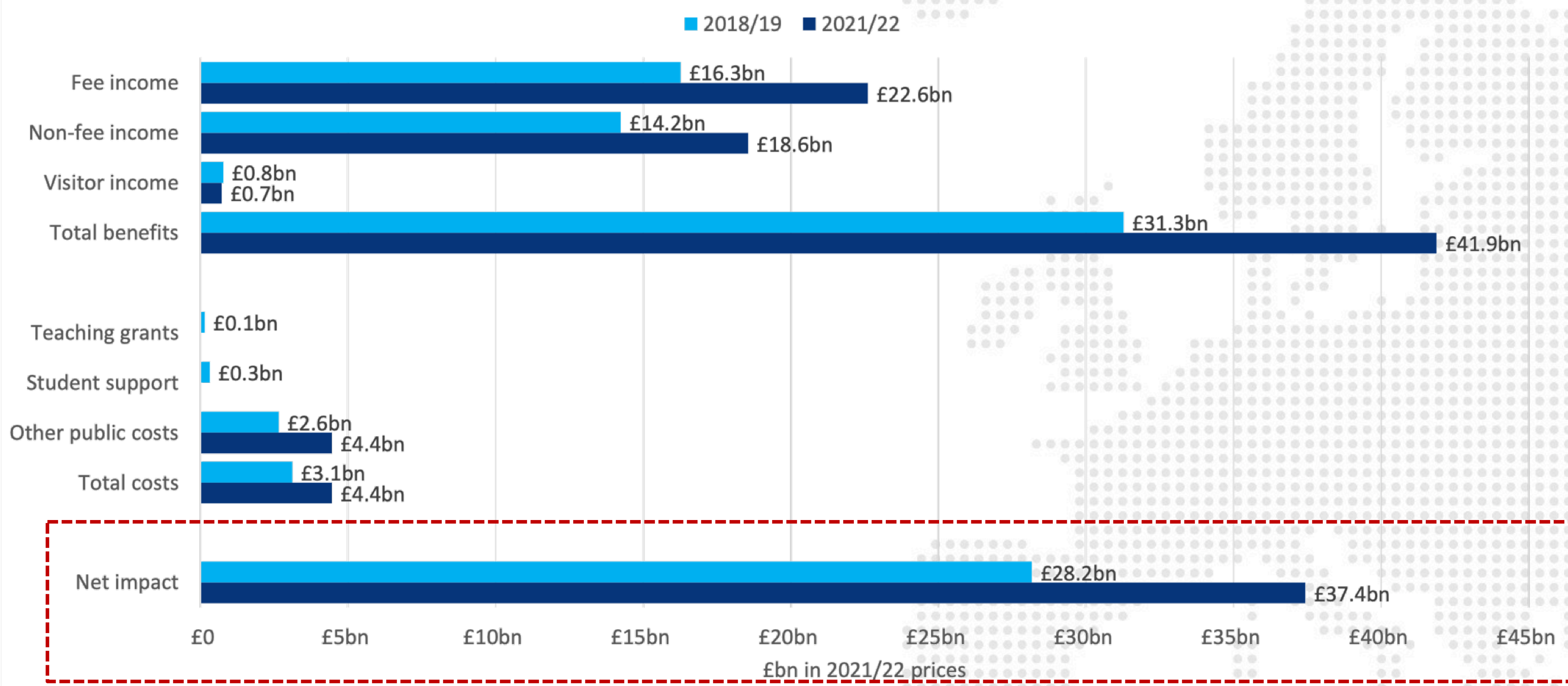
Note: All estimates are presented in 2021-22 prices, and discounted to net present values. Estimates per student are rounded to the nearest £1,000, and aggregate estimates are rounded to the nearest £0.1bn. Estimates might not add up to total due to rounding. Averages are weighted by the number of students in the 2021-22 cohort (across all levels and by study mode).

- The **total net impact on the UK economy** associated with the 2021-22 cohort of first-year international students was estimated at **£37.4bn** This includes **£3.9bn** generated by EU domiciled students[6] and **£33.5bn** associated with non-EU domiciled students.
- The **benefit to cost ratio** associated with hosting EU and non-EU students in the UK stands at **10.6** and **9.3**, respectively – with the overall ratio across all international students standing at **9.4**.
- At student level, the **net economic impact** was estimated to be **£125,000** per EU student, and **£96,000** per non-EU student. In other words, **every 9 EU students** and **every 11 non-EU students** generate **£1m worth of net economic impact for the UK economy** over the duration of their studies.

Change in impact over time - Totals

- The **net economic impact** has increased by 33% in real terms - from **£28.2bn** to **£37.4bn** - between 2018-19 and 2021-22

    - The economic **benefits** have risen from **£31.3bn** to **£41.9bn** (**34%**), driven by the substantial increase in the size of the cohort (all in terms of non-EU students).
    - The **public costs** of hosting international students have also increased, from **£3.1bn** to **£4.4bn** (**43%**). There are no more tuition fee grants or loans or teaching grants for EU students, so that the entire increase is driven by the cost of providing 'other' public services to international students in the UK.



Note: All estimates are presented in 2021-22 prices, discounted to net present values, and rounded to the nearest £0.1bn. Estimates might not add up to total due to rounding.

Change in impact over time – Impact per student

	2018-19			2021-22		
	EU	Non-EU	Average	EU	Non-EU	Average
Impact of fee income	£41,000	£66,000	**£60,000**	£76,000	£58,000	**£59,000**
Impact of non-fee income	£59,000	£50,000	**£52,000**	£59,000	£48,000	**£49,000**
Impact of visitor income	£2,000	£3,000	**£3,000**	£3,000	£2,000	**£2,000**
Total benefits	**£102,000**	**£119,000**	**£115,000**	**£137,000**	**£107,000**	**£110,000**
Teaching grants	£2,000	-	**£1,000**	-	-	**-**
Student support	£5,000	-	**£1,000**	-	-	**-**
Other public costs	£17,000	£7,000	**£10,000**	£13,000	£12,000	**£12,000**
Total costs	**£24,000**	**£7,000**	**£11,000**	**£13,000**	**£12,000**	**£12,000**
Net impact	**£78,000**	**£111,000**	**£103,000**	**£125,000**	**£96,000**	**£98,000**

- In spite of the increase in aggregate terms, the net economic impact *per student* has **declined** from **£103,000** for the 2018-19 cohort to **£98,000** for 2021-22:
  - The impact per **EU** student has **increased** substantially (from **£78,000** to **£125,000**), driven by the significant increase in tuition fees charged post-Brexit, and the removal of public fee support and teaching grant funding.
  - The impact per **non-EU** student has **declined** (from **£111,000** to **£96,000**). This is due to an increase in the cost of public service provision associated with these students (partially driven by an increase in the number of dependants joining these students in the UK), but also a decline in economic benefits (predominantly due to a change in the composition of the cohort)

Note: All estimates are presented in 2021-22 prices, discounted to net present values, and rounded to the nearest £1,000. Estimates might not add up to total due to rounding.

Location of impact

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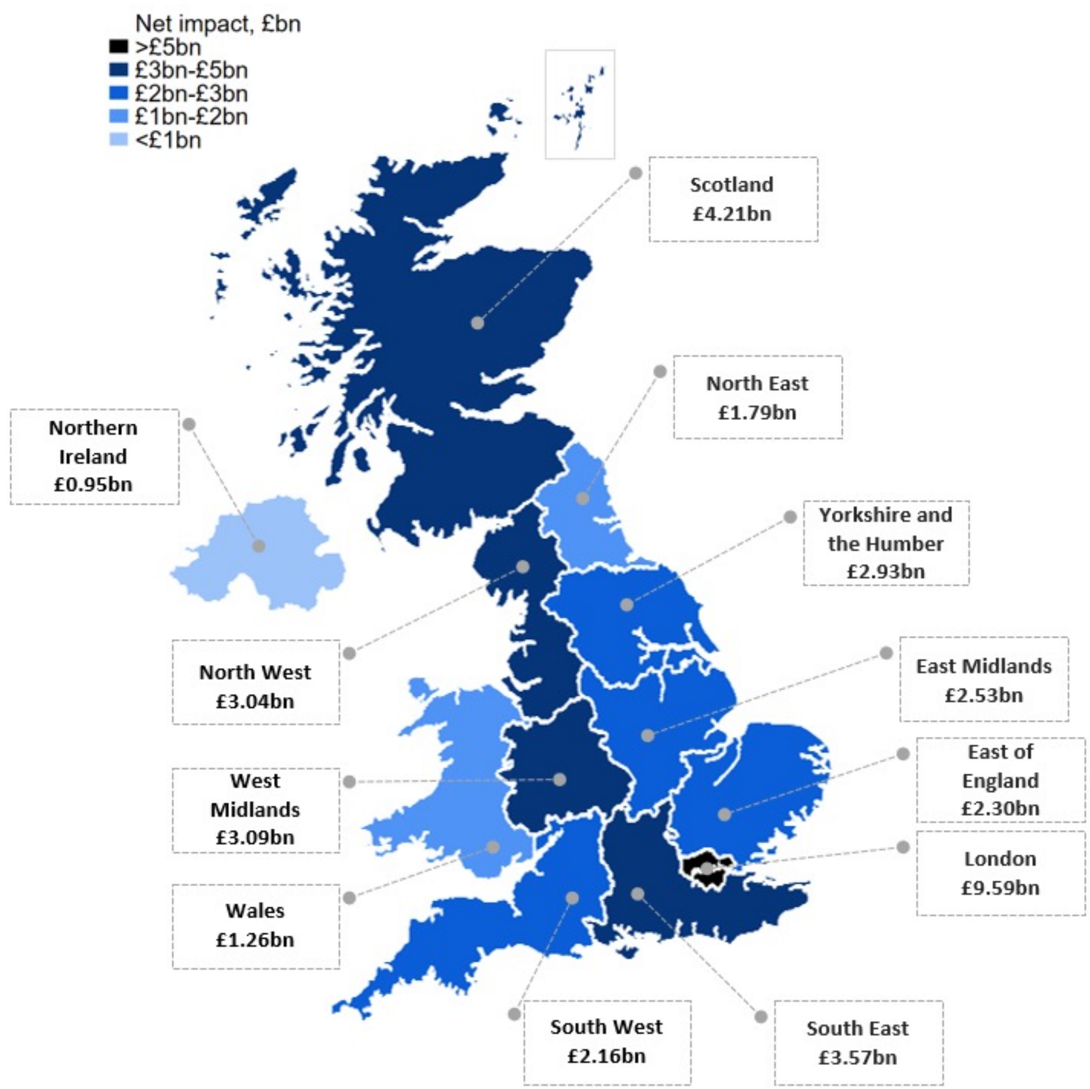
Net impact on the UK by region

- To understand the contribution to the UK economy at a **regional level** (i.e. by 'source region'), we **link international students to the location of the higher education institution they attend**.
- The analysis indicates that international students have an **impact across the entire UK**. The estimated net impact by region varies from **£1.0bn** in **Northern Ireland** to as much as **£9.6bn** generated by international students attending HEIs in **London**.
- Outside of London, the largest impacts are associated with international students studying in **Scotland (£4.2bn)**, the **South East (£3.6bn)**, the **West Midlands (£3.1bn)**, and the **North West (£3.0bn)**.

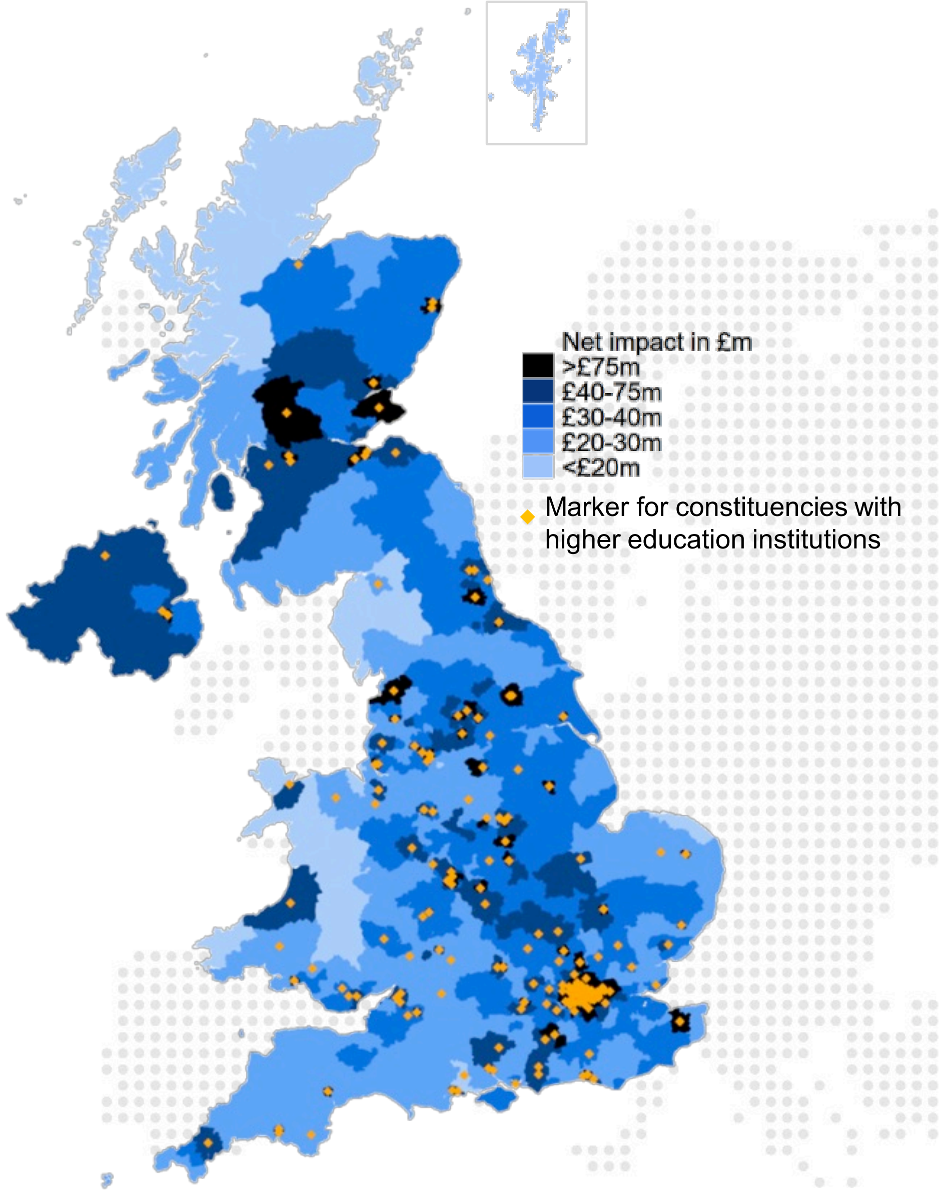
Net impact on the UK economy by region (£bn)



Net impact on the UK by parliamentary constituency

- We further split the net economic impacts by **parliamentary constituency**, using Census data on students' residence by constituency[7].
- As before, the analysis illustrates that the contribution of international students to the UK economy is clustered around the location of HEIs, but also **demonstrates that this economic contribution is spread across the entire UK.**
- On average, students in each of the 650 parliamentary constituencies make a **£58m** net economic contribution to the UK economy. This is equivalent to approximately **£560** per resident.

Net impact on the UK economy by constituency (£m)



Constituencies with *largest* impact

	Constituency	# of intl first-year students	Net impact, £m	Net impact per resident, £
1	Glasgow Central	3,060	£292m	£2,720
2	Holborn and St Pancras	2,995	£291m	£1,720
3	Sheffield Central	2,915	£273m	£1,930
4	Nottingham South	2,600	£271m	£2,190
5	Edinburgh East	2,800	£268m	£2,420
6	Newcastle upon Tyne East	2,765	£264m	£2,560
7	West Ham	2,665	£258m	£1,360
8	Leeds Central	2,695	£253m	£1,570
9	Aberdeen North	2,530	£241m	£2,370
10	Bethnal Green and Bow	2,480	£240m	£1,540
11	East Ham	2,440	£237m	£1,430
12	Bermondsey and Old Southwark	2,395	£233m	£1,550
13	Poplar and Limehouse	2,345	£228m	£1,290
14	Glasgow North	2,360	£226m	£2,840
15	Dundee West	2,185	£208m	£2,330
16	Liverpool, Riverside	1,890	£208m	£1,480
17	Birmingham, Ladywood	1,965	£204m	£1,340
18	Cambridge	2,185	£203m	£1,750
19	Brent Central	2,085	£202m	£1,370
20	Oxford East	1,925	£199m	£1,640
Average (all constituencies)		**585**	**£58m**	**£560**

Note: All monetary estimates are presented in 2021-22 prices, discounted to net present values. Totals are rounded to the nearest £1m, and impacts per resident are rounded to the nearest £10. Student numbers are rounded to the nearest 5.

- **There are constituencies from across almost all UK regions that benefit significantly.**
- The analysis indicates that international students in **Glasgow Central** now make the largest total contribution to the UK economy, standing at **£292m (£2,720** per resident), followed by **Holborn and St Pancras (£291m, £1,720** per resident).
- Previously, Sheffield Central was associated with the highest impact, now ranking third (**£273m, £1,930** per resident).

Constituencies with *smallest* impact

Constituency		# of intl first-year students	Net impact, £m	Net impact per resident, £
631	New Forest West	190	£20m	£230
632	Ynys Mon	230	£20m	£280
633	Wirral West	175	£19m	£280
634	Christchurch	175	£19m	£220
635	Preseli Pembrokeshire	230	£19m	£240
636	Delyn	225	£19m	£270
637	Penrith and The Border	170	£19m	£220
638	Barrow and Furness	170	£19m	£220
639	North Norfolk	195	£18m	£200
640	Blaenau Gwent	215	£18m	£260
641	Workington	150	£16m	£210
642	Brecon and Radnorshire	190	£16m	£240
643	Copeland	145	£16m	£200
644	Aberconwy	185	£16m	£260
645	Montgomeryshire	180	£15m	£240
646	Ross, Skye and Lochaber	155	£15m	£220
647	Caithness, Sutherland and Easter Ross	155	£15m	£250
648	Dwyfor Meirionnydd	175	£15m	£240
649	Orkney and Shetland	90	£9m	£190
650	Na h-Eileanan An Iar	85	£8m	£290
Average (all constituencies)		**585**	**£58m**	**£560**

Note: All monetary estimates are presented in 2021-22 prices, discounted to net present values. Totals are rounded to the nearest £1m, and impacts per resident are rounded to the nearest £10. Student numbers are rounded to the nearest 5.

- Due to differences in the number of students resident in different constituencies, **not all constituencies benefit to the same extent.**
- However, **even the lowest-ranked constituency (in terms of aggregate net impact) benefits from a net contribution associated with international students in the 2021-22 cohort of £8m (£290 per resident).**

Thank you for your time – any questions?

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Endnotes

1. This also includes other ‘non-identifiable’ public expenditure incurred by the UK Exchequer (e.g. relating to the servicing of the national debt), and expenditure on overseas (e.g. diplomatic) activities.
2. While our previous studies also included the costs of public teaching grant and tuition fee support that was previously provided to EU students, given the significant post-Brexit changes in eligibility rules, these types of funding generally no longer apply to EU students who start higher education qualifications in the UK from 2021-22 onwards.
3. In the analysis for 2018-19, the benefit per EU student was instead significantly lower than for non-EU students, driven by the much lower fees paid by EU students before the UK’s exit from the European Union. For this new analysis, we assume the same average fees per student per year for EU and non-EU students (calculated by dividing HESA financial data on tuition fee income from non-EU students in 2020-21 by the underlying total number of non-EU students enrolled at UK HEIs in 2020-21, adjusted to 2021-22 prices using CPI inflation).
4. The spending of family and friends visiting international students in the first year of study (2021-22) was adjusted for the impact of the Covid-19 pandemic on overseas visitors to the UK in that year. For all years of study for the cohort, we made use of ONS International Passenger Survey data on visitor numbers and expenditures for 2019. For 2021-22 (only), based on separate ONS data on overseas travel to the UK in 2018-19 vs. 2021-22, we assume that visitor numbers and associated expenditures were **36%** lower than they would otherwise have been (but we assume no Covid-19 effect in the cohort’s subsequent years of study).
5. Based on Home Office immigration statistics and information from Enroly, we assume that there are approximately 216 dependants (129 adult dependants and 87 child dependants) per 1,000 non-EU domiciled students in the 2021-22 cohort, but only approximately 7 dependants (4 adult dependants and 3 child dependants) per 1,000 EU domiciled students.
6. Compared to 2018-19, the total net impact associated with EU students has declined from £5.1bn (adjusted to 2021-22 prices) to £3.9bn. This is in spite of the large increase in fees and reduction in public costs for these students (due to the lack of fee support and teaching grant funding), and is driven by the substantial reduction in the number of first-year EU domiciled students in 2021-22 as compared to 2018-19.
7. To achieve the breakdown by constituency, for **England and Wales**, we used 2021 Census data on the total number of individuals (aged 16 and above) that are ‘usually resident’ in each constituency – including *both* UK-domiciled and non-UK-domiciled students, studying at any level of education (rather than HE students only) – who were either economically inactive, or economically active and a full-time student. For **Scotland and Northern Ireland**, comparable 2021 Census data are not yet available. Therefore, as before, we again used (relatively outdated) information from the 2011 Census on the total number of full-time students (aged 18 to 74) that are ‘usually resident’ in each parliamentary constituency across the UK – again including *both* UK-domiciled and non-UK-domiciled students, studying at any level of education. As before, the general effect of these assumptions will be to reduce the concentration of economic contribution in and around HEIs, and spread the impact more widely across the country.