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

Report for the Higher Education Policy Institute and Universities UK International

London Economics

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hepi

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Foreword

Since the Higher Education Policy Institute (HEPI) and Kaplan International Pathways published *The costs and benefits of international students by parliamentary constituency* by London Economics in January 2018, a huge amount has happened to affect the global flows of students. Globally, the Covid-19 pandemic affected the ability of students from around the world to access international higher education, through major economic damage and significant travel disruption. The UK's exit from the European Union has resulted in more negative perceptions of the UK among EU students and created additional barriers, through the need to obtain a visa or no longer being eligible for the same fee status and associated access to student finance as UK students.

The policy environment in the UK has also changed. In March 2019, the Government published its *International Education Strategy*, committing to increasing the number of international higher education students choosing the UK as their study destination to 600,000 and the value of education exports to £35 billion per year by 2030. After a decade of rhetoric and policy changes that suggested the Government's aim was the contrary, this commitment was welcomed throughout the higher education sector, including those of us at HEPI and Universities International (UUKi).

In September 2019, this commitment was reinforced by action when a new UK post-study work route, the Graduate route, was announced. This decision followed almost a decade of policy advocacy by both HEPI and UUKi on this topic. Indeed, the first iteration of this research was commissioned to support the case for a more favourable policy environment for international students.

So why re-do this analysis now? While the effects of the Covid-19 pandemic and the UK's exit from the European Union are still unfolding, initial indications suggest that total international students in the UK stayed relatively stable in the 2020/21 academic year, due in part to the improved policy environment. However, data from this year's admissions cycle suggest that the UK's exit from the European Union has severely affected EU student recruitment with acceptances in early August of 2021 to undergraduate degree courses 56% lower than at the equivalent point in 2020. This suggests the UK cannot take its attractiveness as a study destination for international students for granted.

In our view, we should not take the current favourable policy environment for granted either. We need to maintain the evidence base to support widespread understanding of the benefits that international students bring to the UK.

As the analysis that follows shows, the 2018/19 cohort of international students delivered a net economic benefit of £25.9 billion to the UK with every region and parliamentary constituency benefitting. This is a 19% increase in real terms from the net benefit found for the 2015/16 cohort of international students reported in the previous study. Put another way, for the 2018/19 cohort, every 14 EU students and every 10 non-EU students generate £1 million worth of net economic impact for the UK economy over the duration of their studies.

Therefore, as the UK starts on its new path outside of the European Union and on the road to economic and social recovery following the Covid-19 pandemic, there feels like no better time to refresh our understanding of the importance international students play in bringing economic prosperity to every region of the UK.

Finally, although this report focuses exclusively on the economic benefits to institutions, places and – indeed – the whole country of hosting so many international students, our organisations jointly recognise that the non-economic benefits are just as important. They include better learning environments, greater soft power and more diverse campuses. In short, we would not have the excellent higher education sector that we do if it were not for the very valuable financial and non-financial contributions of students and staff from around the world.

Nick Hillman, Director of HEPI

Vivienne Stern, Director of UUKi

Executive Summary

With **496,000** international students studying for qualifications at higher education institutions across the United Kingdom – equivalent to **20%** of all HE students – international students contribute significantly to our economic and social prosperity, both in the short term during their studies as well as in the medium to longer term after they graduate.

Given the continuing importance of international students as a source of export revenues, London Economics were commissioned by the **Higher Education Policy Institute** (HEPI) and **Universities UK International** (UUKi) to re-estimate the **benefits** and **costs** to the United Kingdom economy associated with international students, focusing on the 2018/19 academic year. Following a previous study estimating these impacts for 2015/16 (on behalf of HEPI and Kaplan International Pathways), the analysis updates the previous results by focusing on the cohort of international students who started higher education qualifications in the UK in 2018/19.

Overview of the analysis

We estimate the **economic benefits** of international students in terms of:

- The **tuition fee income** generated by international students studying in the UK, as well as the **knock-on** (or '**indirect**' and '**induced**') effects throughout the UK economy associated with UK universities' spending of this international fee income on staff, goods, and services;
- The income associated with the **non-tuition fee (i.e. living cost) expenditure** of international students, and the subsequent **knock-on** effects of this expenditure throughout the wider economy (i.e. the indirect and induced effects); and
- The income associated with the spending of **friends and family visiting** international students whilst studying in the UK. Again, this expenditure leads to subsequent **knock-on** (indirect and induced) effects throughout the UK economy.

There are a number of benefits that were **not** considered as part of this analysis, predominantly as a result of the difficulty in providing adequately robust evidence and measuring some of these benefits in monetary terms. For example, these include:

- The **tax revenues** generated from international students (or their dependants) while in employment in the United Kingdom – during and/or after their studies[1];
- The longer-term **investment, business** and **trade links** from hosting international students in the United Kingdom;
- The **soft diplomatic power** exerted by the United Kingdom on an international stage as a result of the networks built up during their stays; and
- The **wider cultural** and **societal impacts** associated with a more diverse population.

In relation to the **public costs** associated with hosting international students, we considered:

- The **teaching grant** costs incurred by the Office for Students, the Higher Education Funding Council for Wales, the Scottish Funding Council, and the Department for the Economy for Northern Ireland to fund higher education institutions' provision of teaching and learning activities (for EU students only);
- The costs associated with the **tuition fee support** (through loans and/or grants) provided to EU students studying across the home nations; and

The costs associated with the provision of **other public services** to international students or their dependants. This includes the costs associated with public **healthcare** (net of the NHS Immigration Health Surcharge); **housing** and **community amenities**; primary and secondary-level **education** received by dependent children; **social security**; **public order** and **safety**; **defence; economic affairs**; **recreation** and **culture**; **environmental protection**, and other **general public services**. We also include the costs associated with '**non-identifiable' public expenditure** incurred by the UK Exchequer on behalf of the UK as a whole (e.g. expenditure relating to the **servicing of the national debt**), as well as **expenditure on overseas activities** (e.g. diplomatic activities etc.). This approach underestimates the economic benefits and overstates the economic costs associated with hosting international students in the UK. As such, the estimates of the net economic impact and the benefit to cost ratios should be considered at the lower end of the plausible range.

[1] While not included in the estimates here, we previously undertook a separate study for HEPI and Kaplan International Pathways to estimate the post-graduation tax revenues associated with international students studying in the UK and who enter and remain in the UK labour market after graduating (see London Economics (2019)). More information on this study is presented in Box 1 (see Section 4.4).

Level of analysis

In addition to the total UK-wide impact, to understand the contribution at a **regional level**, we linked international students to the location of the higher education institution they attend. This allows us to understand the contribution to the UK economy originating at a **regional level**.

We also undertook an analysis by **parliamentary constituency**, using information from the 2011 Census on the number of students residing in each parliamentary constituency[2], and apportioned the estimated costs and benefits identified at regional level generated by international students using this distribution of UK domiciled students.

Overview of the 2018/19 cohort of international students

The analysis focuses on the aggregate economic benefits and costs to the **UK economy** associated with the **272,920** new international students *commencing* their studies in the UK in 2018/19, taking account of the total impacts associated with these students **over the entire duration of their study in the UK** (adjusted for completion rates).[3]

Changes over time

Figure 1 presents the number of first-year international students that have come to the United Kingdom for the purposes of study since 2006/07[4]. Reflecting the attractiveness of the UK higher education offer, from approximately **177,000** students at the start of the period, enrolment increased to around **235,000** between 2013/14 and 2016/17, but has further increased more recently. In 2018/19, approximately **273,000** international first-year students entered higher education in the United Kingdom[5]. This represents a **54%** increase since 2006/07.

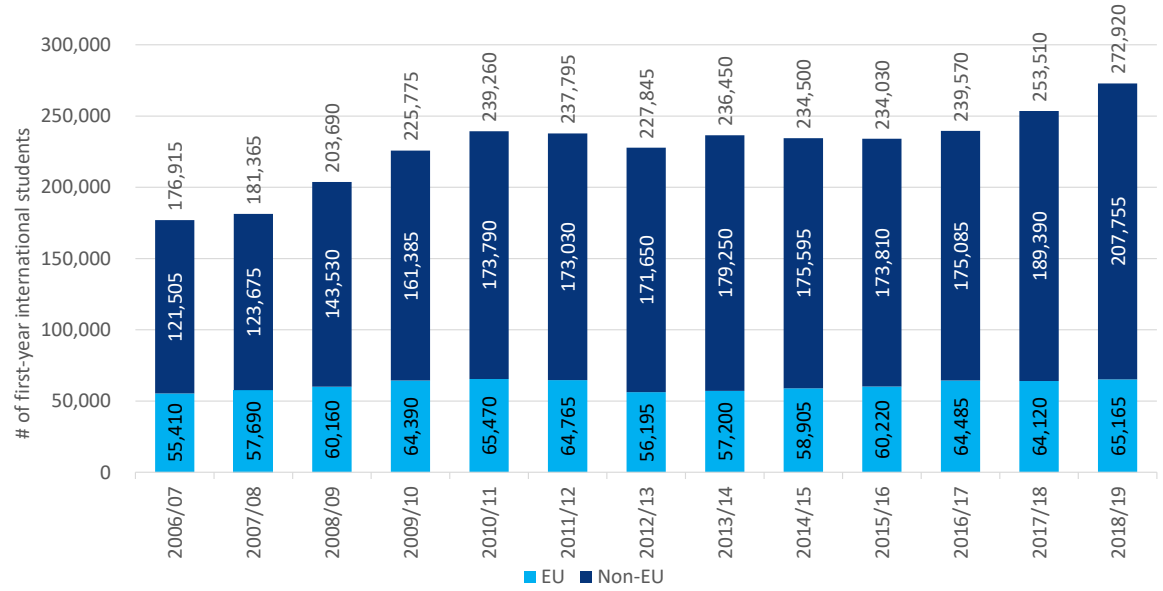
[2] The data on residency by parliamentary constituency include both UK and non-UK domiciled students. Given the difference in the number of UK and non-UK domiciled students, the data primarily reflects the residency of UK domiciled students, and as such, the analysis by parliamentary constituency will not reflect the true picture in some constituencies - especially where there may be a particularly high concentration of international students.

[3] In other words, this approach measures the impact of a single cohort of international students over the course of their studies.

[4] This includes both undergraduate and postgraduate students.

[5] The previous analysis (London Economics (2018)) was based on a total of **231,065** first-year international students in 2015/16 (excluding alternative providers). Including alternative providers, the number of international first-year students in 2015/16 stood at **234,030**. On a like-for-like basis, the number of international first-year students has increased by **38,890** (**17%**) since 2015/16.

Figure 1 International first-year students enrolled in UK higher education, 2006/07 to 2018/19



Note: All student numbers are rounded to the nearest 5. ***Source: London Economics' analysis of HESA (2021c)***

Domicile

Approximately **76%** (**207,755**) of international first-year students in 2018/19 were domiciled outside the EU (a **20%** increase since 2015/16), with the remaining **24%** (**65,165**) domiciled within the EU (from Member States at the time other than the UK).

In terms of the specific non-EU countries that are associated with the greatest number of students coming to the UK, as before, **China** remains the dominant nation, with **86,895** first-year Chinese students entering UK higher education in 2018/19. In other words, approximately **one in every three** international students in the 2018/19 cohort originated from China[6]. **India** and the **United States** were the next most prolific, with **18,305** and **12,390** first year students enrolled in 2018/19, respectively.

The country providing the greatest number of EU domiciled first-year students in 2018/19 was **Germany**, with **7,245** students coming to the United Kingdom, closely followed by **France** and **Italy,** with **6,830** and **6,180** new students in the cohort, respectively.

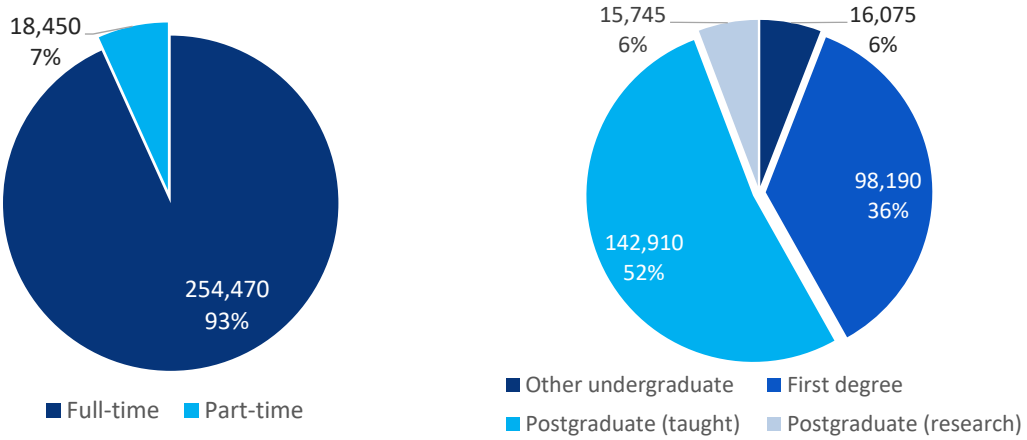
[6] In the 2015/16 cohort, approximately **one in every four** international students originated f rom China.

Level and mode

In terms of study mode, the vast majority of international students in the cohort **(93%)** were studying on a full-time basis, with only **7%** of students undertaking qualifications on a part-time basis.

Considering the level of study undertaken, approximately **52%** (**142,910**) of students were undertaking **taught postgraduate degrees**, with a further **15,745** students undertaking **postgraduate research degrees** (**6%**). Around **114,265** students (**42%**) were engaged in undergraduate qualifications, of which **98,190** (**36%**) were undertaking **first degrees** and **16,075** (**6%**) were enrolled in **other undergraduate qualifications**.

Figure 2 International first-year students enrolled in UK higher education in 2018/19, by level and mode

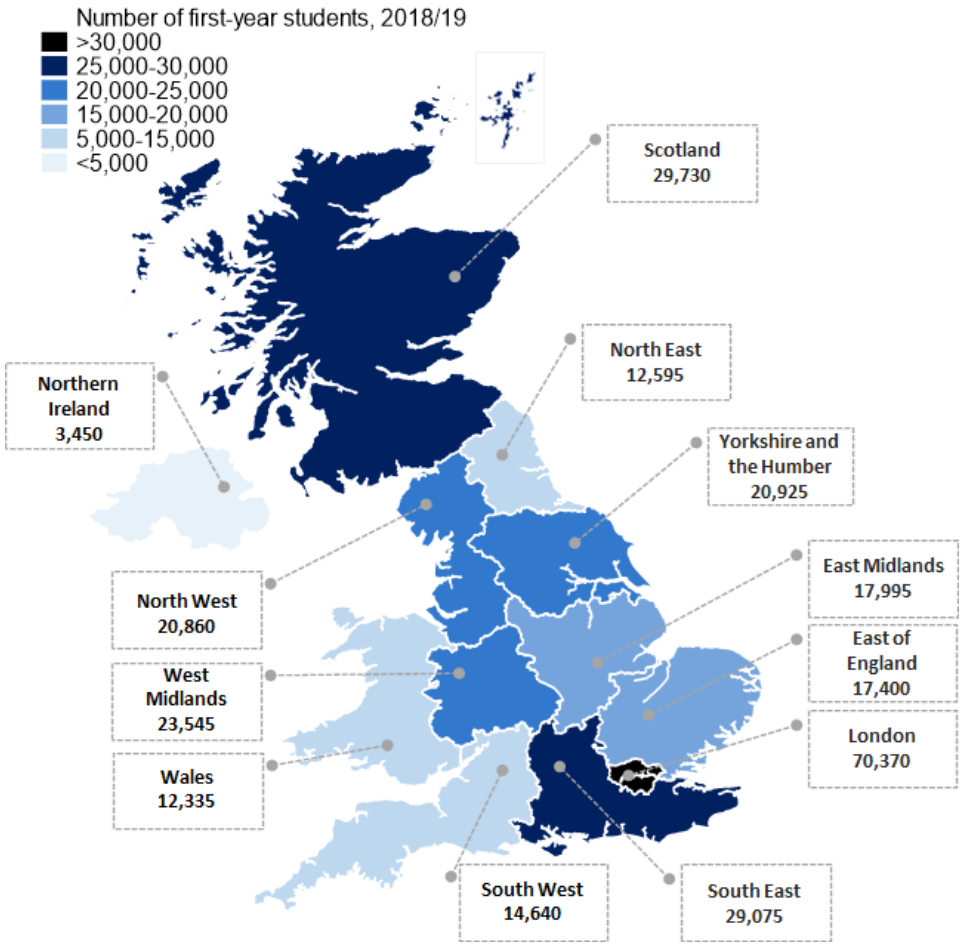


Note: All student numbers are rounded to the nearest 5.
Source: London Economics' analysis of HESA (2021c)

Location of study

International students in the 2018/19 cohort are spread across the entire United Kingdom (see Figure 3). In England, there were approximately **70,370** first-year students enrolled in higher education institutions based in **London**, with a further **29,075** attending institutions in the **South East**. The next most popular region in England was the **West Midlands**, which hosted **23,545** students. Demonstrating the spread of international students across England, there were a further **20,925** international students undertaking their studies in **Yorkshire and the Humber**, **20,860** in the **North West**, **17,995** in the **East Midlands**, and **12,595** in the **North East**. In relation to the other UK home nations, there were approximately **29,730** students attending higher education institutions in **Scotland**, with a further **12,335** in **Wales** and **3,450** in **Northern Ireland**.

Figure 3 Number of international first-year students in 2018/19 – by region



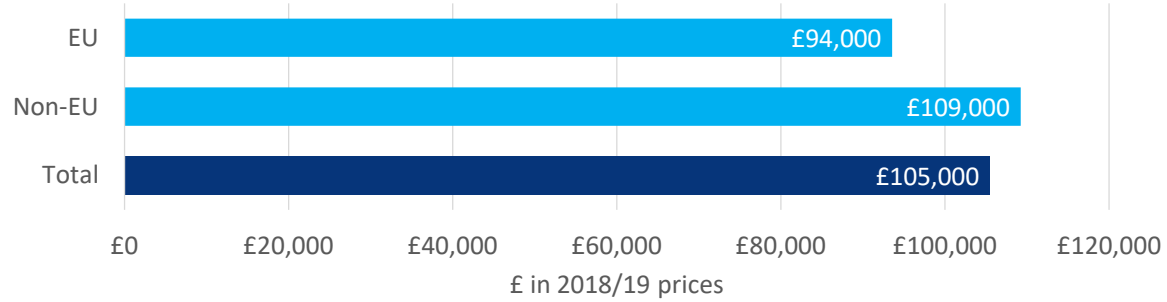
Note: All student numbers are rounded to the nearest 5. ***Source: London Economics' analysis of HESA (2021c***)

Economic benefits associated with international students

Combining the direct, indirect, and induced economic benefits of the tuition fee, non-fee and visitor income associated with international students in the 2018/19 cohort, the total benefit to the UK economy associated with a typical **EU domiciled student** was estimated at approximately **£94,000** (see Figure 4). The comparable estimate per **non-EU student** stood at approximately **£109,000**. The difference between the two estimates is primarily driven by the relatively higher tuition fees charged to non-EU domiciled students as compared to students from EU countries studying at UK HEIs.[7]

[7] Note that the decoupling of the tuition fee charged between UK-domiciled and EU-domiciled students is set to take place in the academic year commencing 1st August 2021, meaning that from the start of the 2021/22 academic year, EU domiciled students are likely to see tuition fee increases to levels comparable with non-EU domiciled students.

Figure 4 Total benefit per student associated with the 2018/19 cohort, by domicile



Note: Values per student are rounded to the nearest £1,000. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding. ***Source: London Economics' analysis***

Aggregating across the entire 2018/2019 cohort of first-year students, we estimate the total economic benefits of international students to the UK economy to be approximately **£28.8bn** over the entire period of their studies, of which **£6.1bn** is generated by EU students, and the remaining **£22.7bn** is generated by non-EU students (Table 1).

Table 1 Total benefits associated with the 2018/19 cohort, by domicile and type of benefit

Type of benefit	EU	Non-EU	Total
Fee income	£2.4bn	£12.5bn	**£15.0bn**
Non-fee income	£3.5bn	£9.6bn	**£13.1bn**
Visitor income	£0.1bn	£0.6bn	**£0.7bn**
Total	**£6.1bn**	**£22.7bn**	**£28.8bn**

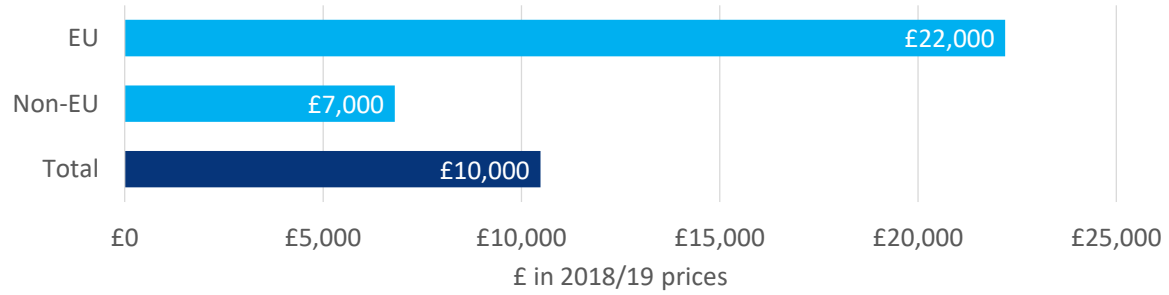
Note: Values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.
Source: London Economics' analysis

Exchequer costs associated with international students

Combining the costs associated with the teaching grants paid to UK higher education institutions (for EU students), student support in the form of tuition fee and/or tuition fee grants (again for EU students only), as well as the costs of providing 'other' public services to international students and their dependants, the cost to the Exchequer per typical EU domiciled student was estimated at **£22,000** (see Figure 5). The comparable figure per non-EU student was estimated at **£7,000**. For EU students, the total cost of **£22,000** includes approximately **£2,000** in teaching grants, **£4,000** in student support costs, and **£16,000** in costs associated with wider public service provision. For the typical non-EU domiciled student, the

total cost of **£7,000** is made up entirely of the costs associated with wider public service provision.[8]

Figure 5 Total cost per student associated with the 2018/19 cohort, by domicile



Note: Values per student are rounded to the nearest £1,000. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

Aggregating across the 2018/2019 cohort of first-year students, the total cost of international students to the UK economy was estimated at **£2.9bn**, split roughly equally between EU (**£1.4bn**) and non-EU (**£1.4bn**) domiciled students (Table 2).

Table 2 Total costs associated with the 2018/19 cohort, by domicile and type of cost

Type of cost	EU	Non-EU	Total
Teaching grants	£0.1bn	-	**£0.1bn**
Student support	£0.3bn	-	**£0.3bn**
Other public costs	£1.0bn	£1.4bn	**£2.4bn**
Total	**£1.4bn**	**£1.4bn**	**£2.9bn**

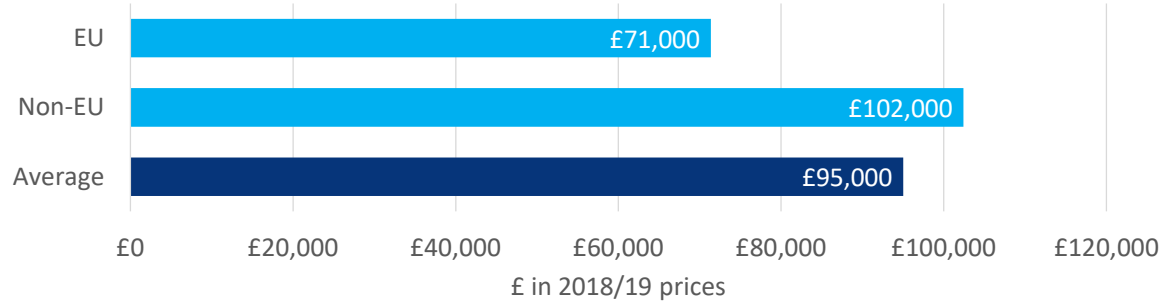
Note: Values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.
Source: London Economics' analysis

Net economic impact of international students

The **net economic impact** per student was estimated to be **£71,000** per 'typical' EU domiciled student in the 2018/19 cohort, and **£102,000** per non-EU domiciled student (see Figure 6). In other words, **every 14 EU students** and **every 10 non-EU students** generate **£1m worth of net economic impact for the UK economy** over the duration of their studies.

[8] The relatively higher costs associated with the provision of 'other' public services per EU student are primarily driven by their higher likelihood of bringing dependants to the UK with them, and the associated additional public cost of providing these 'other' public services to their dependants. In addition, EU students are eligible to benefit from a larger range of such 'other' public services than non-EU students (such as social security).

Figure 6 Net impact per student associated with the 2018/19 cohort, by domicile

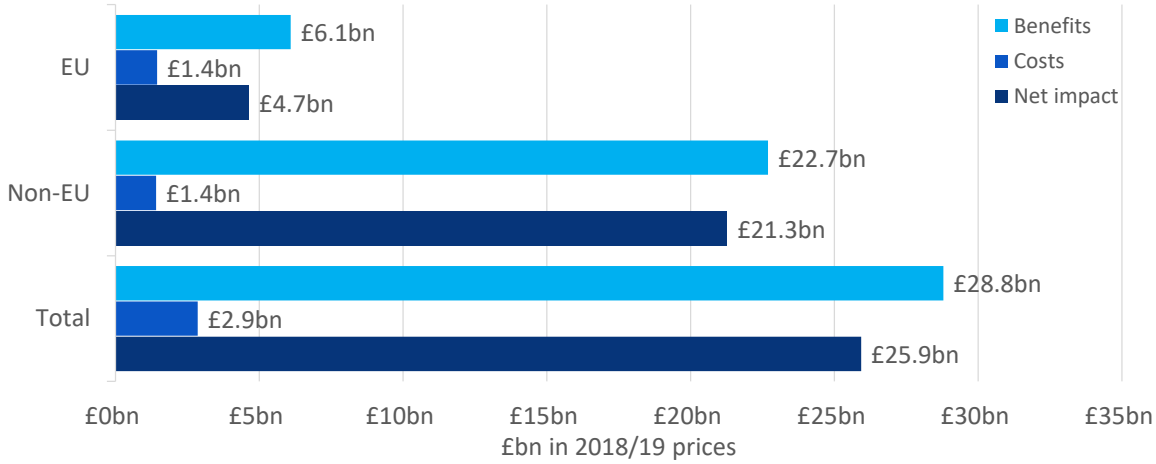


Note: Values per student are rounded to the nearest £1,000. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

Expressed in terms of **benefit to cost ratios**, dividing the gross economic benefit associated with EU domiciled and non-EU domiciled students (estimated to be **£94,000** and **£109,000**, respectively) by the corresponding public costs (estimated at **£22,000** and **£7,000**, respectively), the analysis suggests that there is a benefit to cost ratio of approximately **4.2** and **16.1** associated with hosting EU and non-EU students in the UK, respectively (and **10.1** on average across both domiciles).

Aggregating across the total cohort of first-year international students enrolled with UK HEIs in the 2018/19 academic year, **the total net impact of international students on the UK economy was estimated to be £25.9bn**. Approximately **£4.7bn** of net impact was associated with EU domiciled students, while the remaining **£21.3bn** was generated by non-EU domiciled students (see Figure 7).

Figure 7 Net impact associated with the 2018/19 cohort, by domicile



Note: Values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

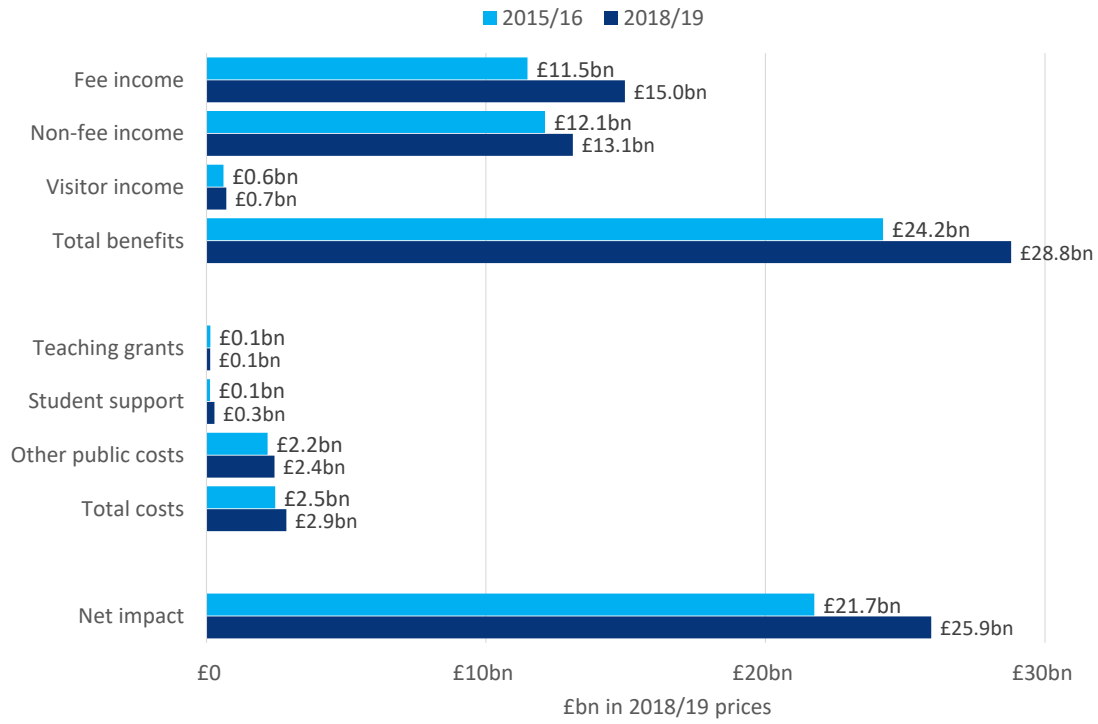
Change in net impact over time

In Figure 8, we provide a comparison of the net economic contribution associated with the 2015/16 and 2018/19 cohorts of international students. Reflecting the **17%** increase in the number of international students between 2015/16 2018/19

(predominantly driven by an increase in enrolment amongst non-EU domiciled students), the net economic impact on the UK economy has increased from **£21.7bn** for the 2015/16 cohort to **£25.9bn** associated with the 2018/19 cohort (a **19%** increase in real terms)[9]:

- The **economic benefits** have risen from **£24.2bn** to **£28.8bn** (**19%**), driven by an increase in the tuition fee income from international students (due to higher fees charged to non-EU students and EU postgraduate students, and the increase in the size of the cohort).
- The **public costs** of hosting international students have also increased, but to a smaller extent (from **£2.5bn** to **£2.9bn** (**16%**)). This increase was driven by an increase in the costs of **student support** provided to EU domiciled students (due to an increase in the RAB charge[10] associated with fee loans for students in England, and the increase in the size of the cohort); and the costs of providing **'other' public services** (again due to the larger cohort size)).

Figure 8 Net impact associated with the 2015/16 and 2018/19 cohorts



Note: Values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

[9] The previous results for 2015/16 have been converted to 2018/19 prices, to allow for a comparison in real terms.

[10] The **Resource Accounting and Budgeting Charge** (or RAB Charge) captures the proportion of the student fee and maintenance loan that is expected not to be repaid.

Net impact by parliamentary constituency

Table 3 summarises the average net impact per parliamentary constituency, by UK region. On average, international students make a **£40m net economic contribution to the UK economy per parliamentary constituency**, which is equivalent to **£390** per member of the resident population (after all costs have been accounted for).

The average impact was highest for parliamentary constituencies in **London** (with an average net impact of **£88m** per constituency, equivalent to **£760** per resident). The average impact per parliamentary constituency in the **North East** and **Scotland** was estimated at **£460** per member of the resident population; between **£370** and **£400** per member of the resident population in the **East and West Midlands** and **Yorkshire and the Humber**; and between **£270** and **£340** per member of the resident population in the **North West**, **South East**, **South West**, **the East of England**, and **Wales**.

Table 3 Average impact associated with the 2018/19 cohort per parliamentary constituency, by region

Region	# of 1st year students	Benefits	Costs	Net impact	Net impact per resident
East of England	300	£33m	£3m	**£29m**	**£290**
East Midlands	390	£43m	£3m	**£40m**	**£390**
London	965	£98m	£11m	**£88m**	**£760**
North East	435	£46m	£4m	**£42m**	**£460**
North West	280	£33m	£3m	**£30m**	**£300**
South East	345	£38m	£4m	**£34m**	**£330**
South West	265	£30m	£3m	**£27m**	**£270**
West Midlands	400	£43m	£4m	**£39m**	**£400**
Yorkshire & the Humber	390	£41m	£3m	**£38m**	**£370**
Wales	310	£31m	£4m	**£27m**	**£340**
Scotland	505	£49m	£7m	**£42m**	**£460**
Northern Ireland	190	£18m	£3m	**£14m**	**£140**
Average	**420**	**£44m**	**£4m**	**£40m**	**£390**

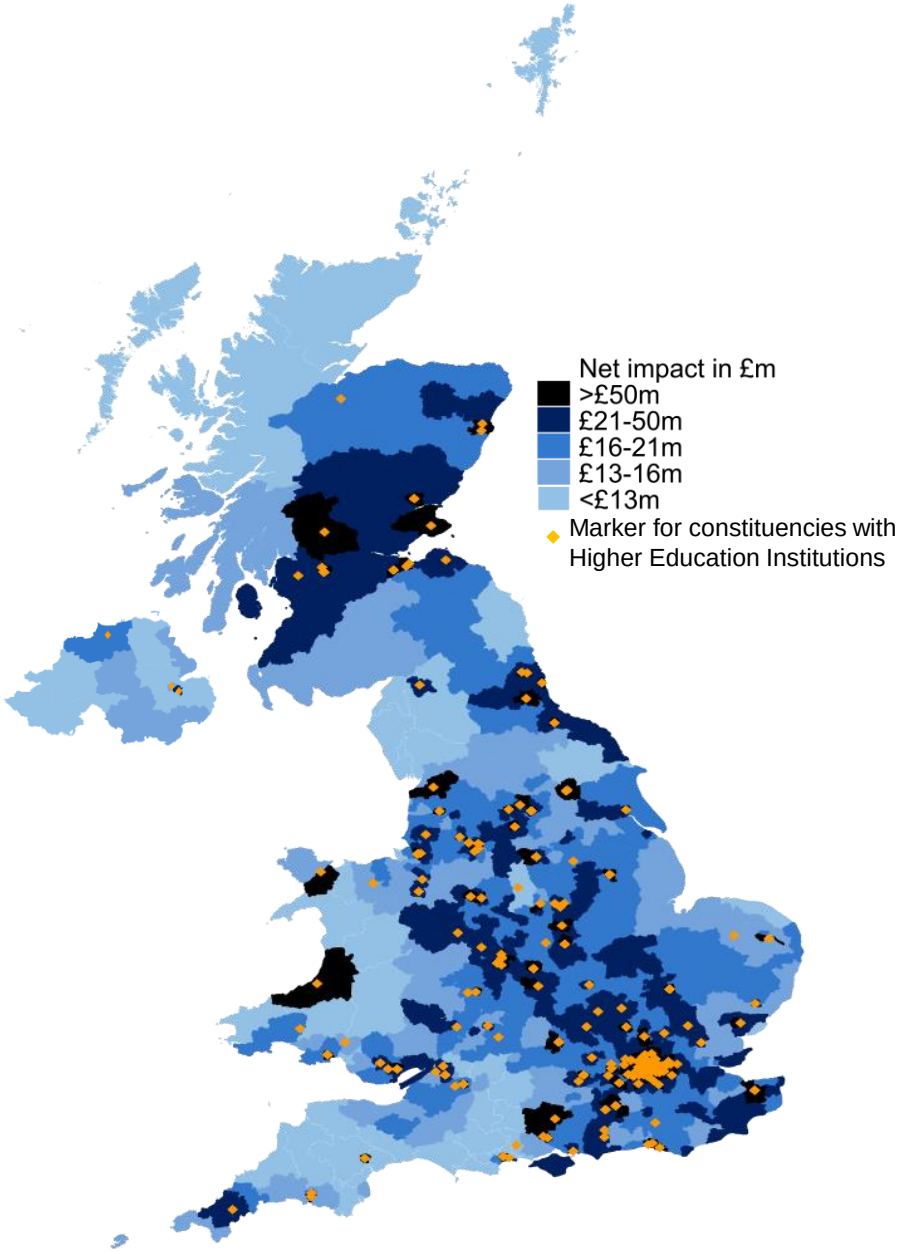
Note: Numbers of students are rounded to the nearest 5; total estimates are rounded to the nearest £1 million; and estimates per resident are rounded to the nearest £10. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Estimates of the total resident population are derived from the 2011 Census (see Office for National Statistics, 2011b). ***Source: London Economics' analysis***

We further split the above net impacts by **parliamentary constituency** (Figure 9). The analysis illustrates that the contribution of international students to the UK economy is clustered around the location of higher education institutions - but also demonstrates the economic contribution made by international students across the entire United Kingdom.

Reflecting the estimated number of international first-year students resident in **Sheffield Central** (**2,980**), the analysis indicates that the contribution to the UK economy of the international students in the 2018/19 cohort resident in Sheffield Central stands at approximately **£290m**, which is equivalent to **£2,520** per member of the overall resident population (see Table 4). The other constituencies where international students make the greatest contribution to the UK economy are **Nottingham South** (**£261m** (**£2,390**)), **Holborn and St Pancras** (**£243m** (**£1,790**)), **Newcastle upon Tyne East** (**£240m** (**£2,510**)), **East Ham** (**£217m** (**£1,450**)) and **Cambridge** (**£214m** (**£1,860**)).

There are constituencies from across almost all UK regions represented on the top-20 list, with international students in **Manchester Central** (North West) contributing **£211m** (**£1,570**); **Oxford East** (South East) contributing **£211m** (**£1,740**); **Birmingham Ladywood** (West Midlands) contributing **£183m** (**£1,450**); **Cardiff Central** (Wales) contributing **£181m** (**£2,050**); **Bristol West** (South West) contributing **£175m** (**£1,400**); and **Glasgow Central** (Scotland) contributing **£171m** (**£1,880**).

Figure 9 Net impact associated with the 2018/19 cohort, by parliamentary constituency



Note: All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis. Contains National Statistics data, OS data, Royal Mail, Gridlink, LPS (Northern Ireland), ONS, NISRA data, NRS data and Ordnance Survey data © Crown copyright and database right 2021.***

Table 4 Total costs, benefits, and impact of international students in the top 20 parliamentary constituencies in terms of net impact

Rank	Parliamentary Constituency	# of 1st year students	Benefits	Costs	Net impact	Net impact per resident
1	Sheffield Central	2,980	£313m	£23m	£290m	£2,520
2	Nottingham South	2,575	£283m	£22m	£261m	£2,390
3	Holborn and St Pancras	2,670	£272m	£29m	£243m	£1,790
4	Newcastle upon Tyne East	2,455	£263m	£22m	£240m	£2,510
5	East Ham	2,385	£243m	£26m	£217m	£1,450
6	Cambridge	2,180	£238m	£24m	£214m	£1,860
7	West Ham	2,330	£237m	£25m	£212m	£1,340
8	Manchester Central	1,950	£230m	£19m	£211m	£1,570
9	Oxford East	2,135	£233m	£22m	£211m	£1,740
10	Liverpool, Riverside	1,885	£222m	£18m	£203m	£1,770
11	Leeds Central	2,030	£213m	£16m	£198m	£1,490
12	Bermondsey & Old Southwark	2,020	£206m	£22m	£184m	£1,450
13	Birmingham, Ladywood	1,860	£201m	£17m	£183m	£1,450
14	Leicester South	1,795	£197m	£15m	£182m	£1,530
15	Cardiff Central	2,070	£206m	£25m	£181m	£2,050
16	Bethnal Green and Bow	1,935	£197m	£21m	£176m	£1,410
17	Bristol West	1,720	£191m	£16m	£175m	£1,400
18	Glasgow Central	2,065	£199m	£28m	£171m	£1,880
19	Coventry South	1,715	£185m	£16m	£169m	£1,600
20	Portsmouth South	1,635	£178m	£17m	£161m	£1,500
Average (all constituencies)		**420**	**£44m**	**£4m**	**£40m**	**£390**

Note: Numbers of students are rounded to the nearest 5; total estimates are rounded to the nearest £1 million; and estimates per resident are rounded to the nearest £10. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

1 Introduction

1.1 Background and scope

London Economics were commissioned by the **Higher Education Policy Institute** (HEPI) and **Universities UK international** (UUKi) to estimate the benefits and costs to the UK economy associated with international higher education students studying at UK universities. Following a previous study estimating these impacts for the 2015/16 academic year[11], the analysis updates the previous results by focusing on the benefits and costs associated with the cohort of international students who started higher education qualifications in the UK in 2018/19.

As with the previous study, the **economic benefits** of international students considered here include:

- The **tuition fee income** generated by international students studying in the UK, as well as the **knock-on** (or '**indirect**' and '**induced**') effects throughout the UK economy associated with UK universities' spending of this international fee income on staff, goods, and services;
- The income associated with the **non-tuition fee (i.e. living cost) expenditure** of international students[12], as well as the subsequent **knock-on** effects of this expenditure throughout the wider economy (i.e. the indirect and induced effects); and
- The income associated with the spending of **friends and family visiting** international students whilst studying in the UK. Again, this expenditure leads to subsequent **knock-on** (indirect and induced) effects throughout the UK economy.

Note that there are a number of benefits that were **not** considered as part of this analysis (given the difficulty in providing adequately robust evidence and/or measuring these benefits in monetary terms). These omissions imply that the analysis will **underestimate** the true contribution of international students to the UK economy, and include:

[11] See London Economics (2018). The previous study was undertaken on behalf of HEPI and Kaplan International Pathways.

[12] This includes students' expenditures on **accommodation costs** (rent, council tax, bills, etc.), **subsistence costs** (food, entertainment, personal items, etc.), **direct course costs** (textbooks, journal or library subscriptions, computer equipment, etc.), **facilitation costs** (e.g. course-related travel costs), and **spending on children** (including childcare that is not related to their study).

- The **tax revenues** associated with international students (or their dependants) while in employment in the UK – either during or after their studies[13];
- The improved opportunities offered to UK domiciled students, given that a number of courses are only **viable** in the presence of sufficient numbers of international students;
- The economic benefits associated with students coming to the United Kingdom on Erasmus exchange programmes[14], or students that are engaged in pre-university programmes (e.g. pathway embedded or independent colleges, or pre-sessional English courses);
- The UK's **soft diplomatic power** internationally as a result of the networks built up through hosting international students[15];
- The **global status** of UK universities, reflected in research partnerships, international research funding opportunities, and international staff recruitment;
- The longer-term **investment, business** and **trade links** that are expected to occur as a result of hosting international students in the United Kingdom; and
- The **wider cultural and societal impacts** associated with a more diverse population.

In relation to the **public costs** associated with international students, we assessed:

- The cost of **teaching grants** provided by the Office for Students (OfS), the Higher Education Funding Council for Wales (HEFCW), the Scottish Funding Council (SFC), and the Department for the Economy for Northern Ireland to fund higher education institutions' provision of teaching and learning activities (applicable to EU students only);
- The costs associated with the **tuition fee support** (through loans and/or grants) provided to EU domiciled students studying in the UK; and
- The costs associated with the provision of **other public services** to international students or their dependants (depending on eligibility). This includes the costs associated with:
  - **Healthcare** (net of any NHS Immigration Health Surcharge/Levy[16]);

[13] While not included in the estimates here, we previously undertook a separate study to estimate the post-graduation tax revenues associated with international students studying in the UK and who enter and remain in the UK labour market after graduating (see London Economics (2019)). More information on this study is presented in Box 1 (see Section 4.4).
[14] See Department for Education (2020a) where the estimate of export revenues associated with Erasmus students in 2018 stood at £440 million.
[15] See Higher Education Policy Institute (2020)

- **Housing** and **community amenities**;
- **Pre-primary, primary and secondary-level education** received by dependent children;
- **Social security benefits**;
- **Public order and safety**;
- **Defence;**
- **Economic affairs**;
- **Recreation**, **culture**, and **religion**;
- **Environmental protection**;
- Other **general public services**;
- **'Non-identifiable' public expenditure** that is incurred on behalf of the UK as a whole (e.g. expenditure relating to the servicing of the national debt); and
- **Expenditure on overseas activities** (e.g. diplomatic activities).

The analysis focuses on these benefits and costs associated with the **272,920** international students who *started* higher education qualifications in the United Kingdom in the 2018/19 academic year (equivalent to **25%** of all first-year students enrolled in UK higher education in that year), taking account of the impact associated with these students **over the entire duration of their study in the UK** (adjusted for completion rates).[17]

In addition to the benefits and costs at UK level, to understand the contribution at a **regional level**, we linked international students to the location of the higher education institution they attended, allowing us to estimate the benefits to the UK economy originating from each region, as well as the public costs by region.

[16] While all **non-EU students** and their dependants are eligible for UK public healthcare, they must pay a compulsory annual NHS immigration health surcharge towards their healthcare costs.

[17] It is important to note that the estimates of the net impact associated with the 2018/19 cohort of international students are likely to significantly differ from subsequent academic years following the UK's exit from the European Union. Building on an initial analysis by London Economics (2017a) for HEPI and Kaplan International Pathways assessing the international demand for UK higher education, a study by London Economics on behalf of the Department for Education (see Department for Education, 2021) estimated that the combined policy changes resulting from Brexit (including the removal of tuition fee support for EU domiciled students and the de-coupling of EU and Home fees (so that EU students pay the same fees as non-EU students)) would result in a **57%** decline in the number of EU domiciled students entering UK higher education each year. While the expected decline in the number of EU students might be partially offset by the higher tuition fees charged to EU students post-Brexit (and the reduced public costs associated with these students), the decline in the total non-fee income derived from EU students will likely result in a significant reduction in the total net impact associated with international students studying in the UK in subsequent academic years. Assuming no change in the composition of the student cohort (i.e. the 57% reduction applies equally across all qualification levels, and the remaining EU-domiciled students are classified as non-EU domiciled international students), the total negative effect associated with this reduction in demand was estimated to be approximately **£1.2 billion**.

The analysis was also broken down by **parliamentary constituency**. For this, we used information from the 2011 Census on the number of total full-time students (including both UK domiciled and non-UK domiciled students) – at any level of education - residing in each constituency[18]. We then apportioned the estimated costs and benefits at regional level according to this distribution of students by constituency.

1.2 Structure of this report

The remainder of this report is structured as follows:

- In Section 2, we provide an overview of the **characteristics of the cohort of international students commencing their studies at UK higher education institutions in 2018/19**.
- Section 3 describes the **methodology** underlying the analysis.
- In Section 4, we provide estimates of the **benefits** to the UK economy associated with international students in the 2018/19 cohort.
- In Section 5, we focus on the **public purse costs** associated with hosting these international students and their dependants in the UK.
- Finally, in Section 6, we combine the information on costs and benefits to present the **net impact** of these international students to the **UK economy** – in **aggregate**, **by region**, and **by parliamentary constituency**.

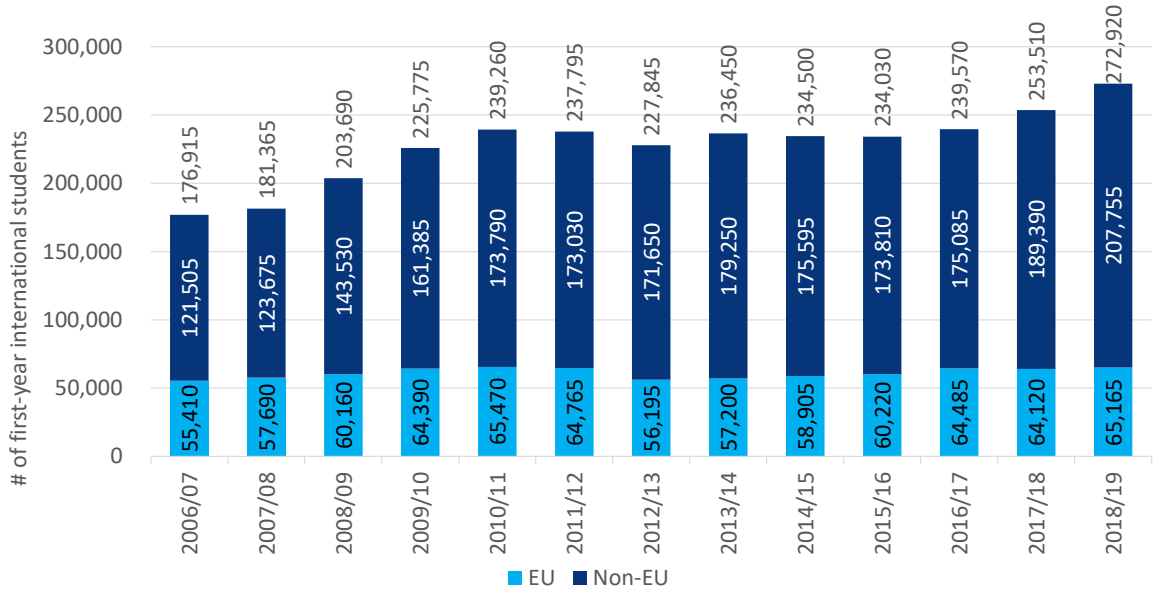
[18] For more information on the underlying data, and associated caveats, see Section 3.2.3.

2 The 2018/19 cohort of international students

2.1 Number of first-year students over time

Figure 10 presents the number of undergraduate and postgraduate first-year international students enrolled in UK higher education since 2006/07. Reflecting the attractiveness of the UK higher education offer, from approximately **177,000** students at the start of the period, international enrolments increased to around **235,000** between 2013/14 and 2016/17, and to **273,000** students in 2018/19.[19] This represents a **54%** increase in international first-year students studying in the UK between 2006/07 and 2018/19.

Figure 10 International first-year students enrolled in UK higher education, 2006/07 to 2018/19



Note: All student numbers are rounded to the nearest 5.
Source: London Economics' analysis of HESA (2021c)

2.2 Domicile

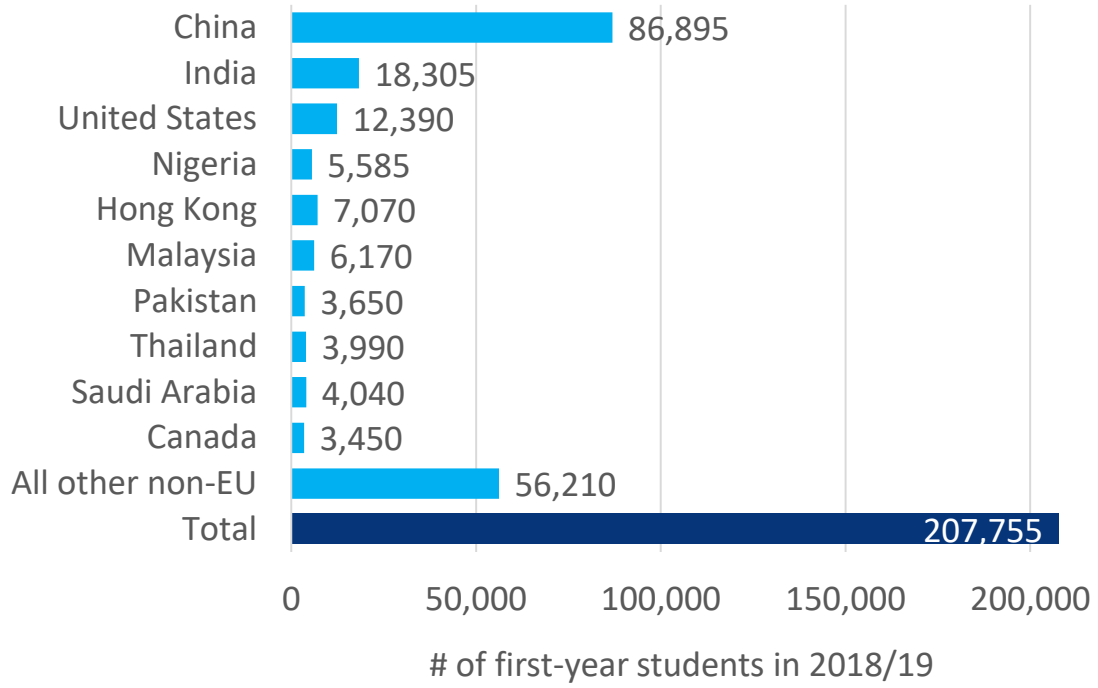
Approximately **76%** (**207,755**) of international first-year students in 2018/19 were domiciled outside the EU (a **20%** increase since 2015/16), with the remaining **24%** (**65,165**) domiciled within the EU (from Member States at the time other than the UK).

[19] The previous analysis (London Economics, 2018) was based on a total of **231,065** first-year international students in 2015/16, including students at publicly funded HEIs only (but excluding alternative providers). Including alternative providers (which have now been added to the published HESA student data), the number of international first-year students in 2015/16 stood at **234,030**. In other words, on a like-for-like basis, the number of international first-year students has increased by **38,890** (**17%**) since 2015/16.

In terms of non-EU countries associated with the greatest number of students coming to the UK, **China** remains the dominant nation, with **86,895** first-year Chinese students entering UK higher education in 2018/19 (see Figure 11). In other words, almost **one in every three** international students in the 2018/19 cohort originated from China[20]. **India** and the **United States** were the next most prolific, with **18,305** and **12,390** first-year students enrolled in 2018/19, respectively.

The country providing the greatest number of EU domiciled first-year students in 2018/19 was **Germany**, with **7,245** students coming to the United Kingdom, closely followed by **France** and **Italy,** with **6,830** and **6,180** students in the cohort, respectively (see Figure 12).

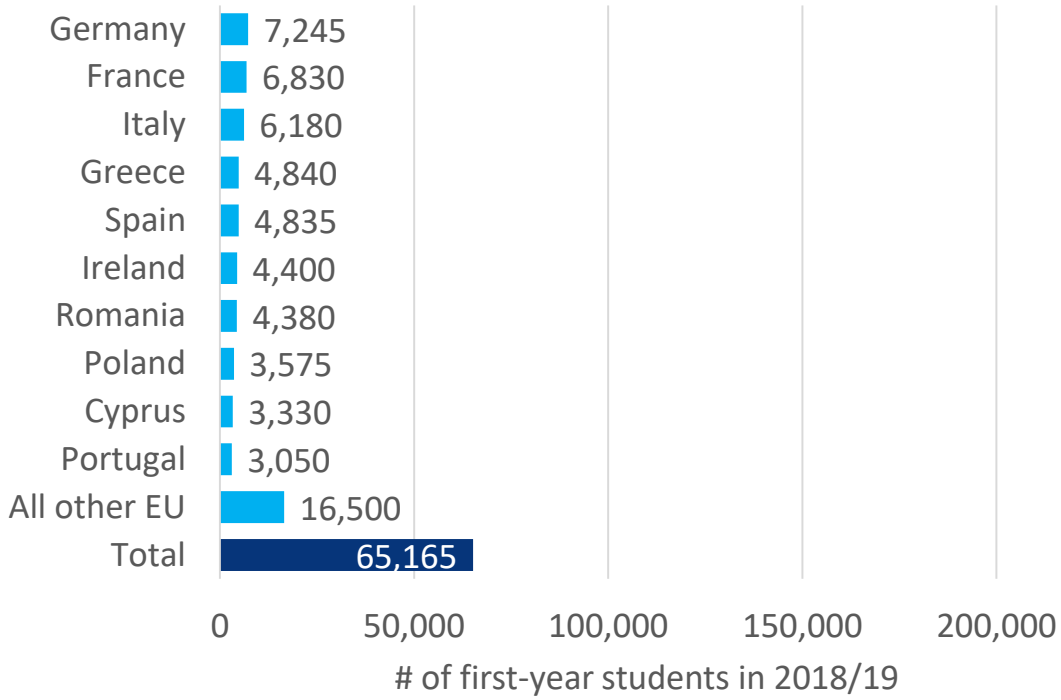
Figure 11 International first-year students enrolled in UK higher education in 2018/19 - Top 10 non-EU countries of domicile



Note: All student numbers are rounded to the nearest 5.
Source: London Economics' analysis of HESA (2021c)

[20] In the 2015/16 cohort, approximately **one in every four** international students originated from China.

Figure 12 International first-year students enrolled in UK higher education in 2018/19 - Top 10 EU countries of domicile



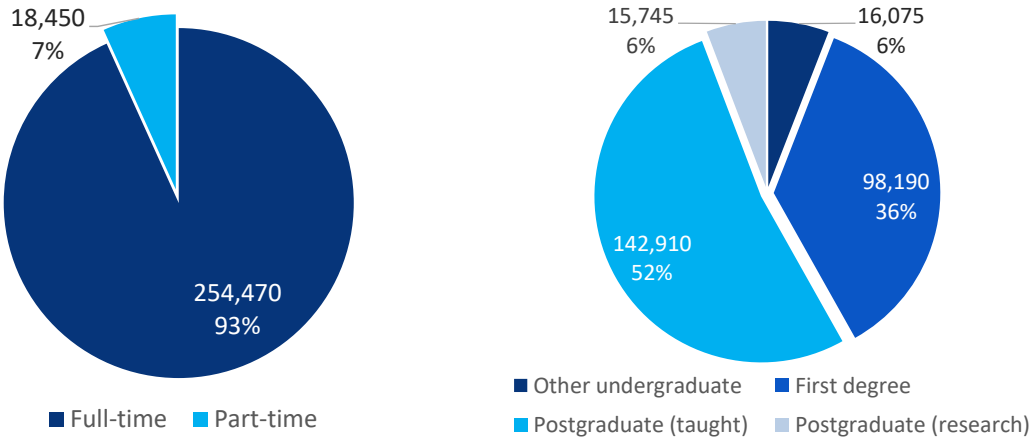
Note: All student numbers are rounded to the nearest 5.
Source: London Economics' analysis of HESA (2021c)

2.3 Level and mode of study

Figure 13 presents the profile of the **272,920** international first-year students in 2018/19 in terms of mode of study. The vast **majority of these international students (93%)** were undertaking qualifications on a full-time basis, with only **7%** of students undertaking qualifications on a part-time basis.

In terms of level of study, **52%** (**142,910**) of students in the cohort were undertaking **taught postgraduate degrees**, with a further **15,745** students undertaking **postgraduate research degrees** (**6%**). Around **114,265** students (**42%**) were engaged in undergraduate qualifications, of which **98,190** (**36%**) were undertaking **first degrees** and **16,075** (**6%**) were enrolled in **other undergraduate qualifications**.

Figure 13 International first-year students enrolled in UK higher education in 2018/19, by level and mode



Note: All student numbers are rounded to the nearest 5.
Source: London Economics' analysis of HESA (2021c)

Table 5 International first-year students in 2018/19 - by domicile, mode, and level

Level and mode of study	Domicile		
	EU	Non-EU	Total
Full-time	**58,585**	**195,885**	**254,470**
Other undergraduate	1,225	5,865	**7,090**
First degree	33,500	64,085	**97,585**
Postgraduate (taught)	19,935	115,105	**135,040**
Postgraduate (research)	3,925	10,830	**14,755**
Part-time	**6,580**	**11,870**	**18,450**
Other undergraduate	2,390	6,595	**8,985**
First degree	315	290	**605**
Postgraduate (taught)	3,435	4,435	**7,870**
Postgraduate (research)	440	550	**990**
Total	**65,165**	**207,755**	**272,920**
Other undergraduate	3,615	12,460	**16,075**
First degree	33,815	64,375	**98,190**
Postgraduate (taught)	23,370	119,540	**142,910**
Postgraduate (research)	4,365	11,380	**15,745**

Note: All student numbers are rounded to the nearest 5. ***Source: London Economics' analysis of HESA (2021c)***

A detailed breakdown of first-year international students in 2018/19 by domicile, study mode and level of study is provided in Table 5.

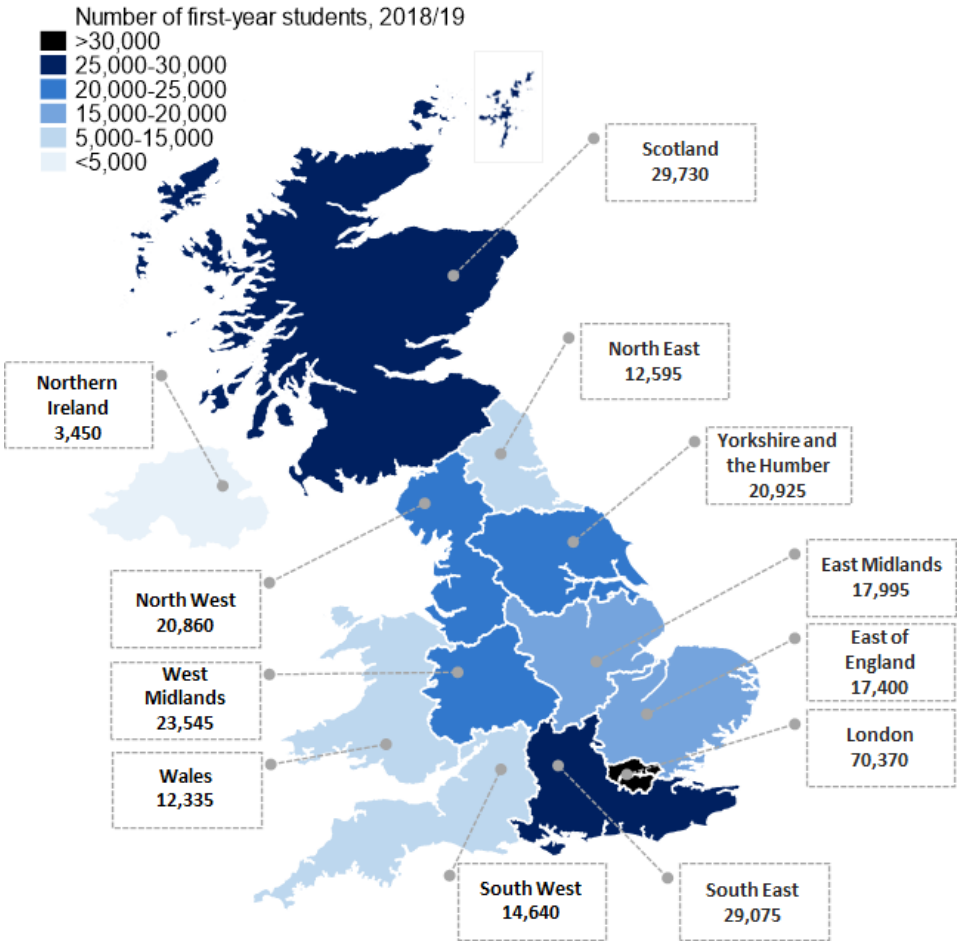
2.4 Location of study

Figure 14 and Figure 15 demonstrate the geographical spread of first-year international students in the 2018/19 cohort by UK region. In England, there were approximately **70,370** first-year students enrolled with London-based higher education institutions, with a further **29,075** attending institutions in the South East. The next most popular region in England was the West Midlands, which hosted approximately **23,545** students. Demonstrating the spread of international students across England, there were a further **20,925** students studying in Yorkshire and the Humber, **20,860** in the North West, **17,995** in the East Midlands, and **12,595** in the North East. In relation to the other UK home nations, there were **29,730** international first-year students studying in Scotland, **12,335** in Wales, and **3,450** in Northern Ireland.

Considering the **concentration** of international students relative to the total resident population (as per the 2011 Census[21]), the analysis illustrates that, on average across all regions, there was 1 international student per approximately **230** members of the resident population in each region. While the corresponding concentration in London and Scotland was as high as **120:1** and **180:1**, respectively, the lowest concentration of international students occurred in the South West (**360:1**) and Northern Ireland (**520:1**).

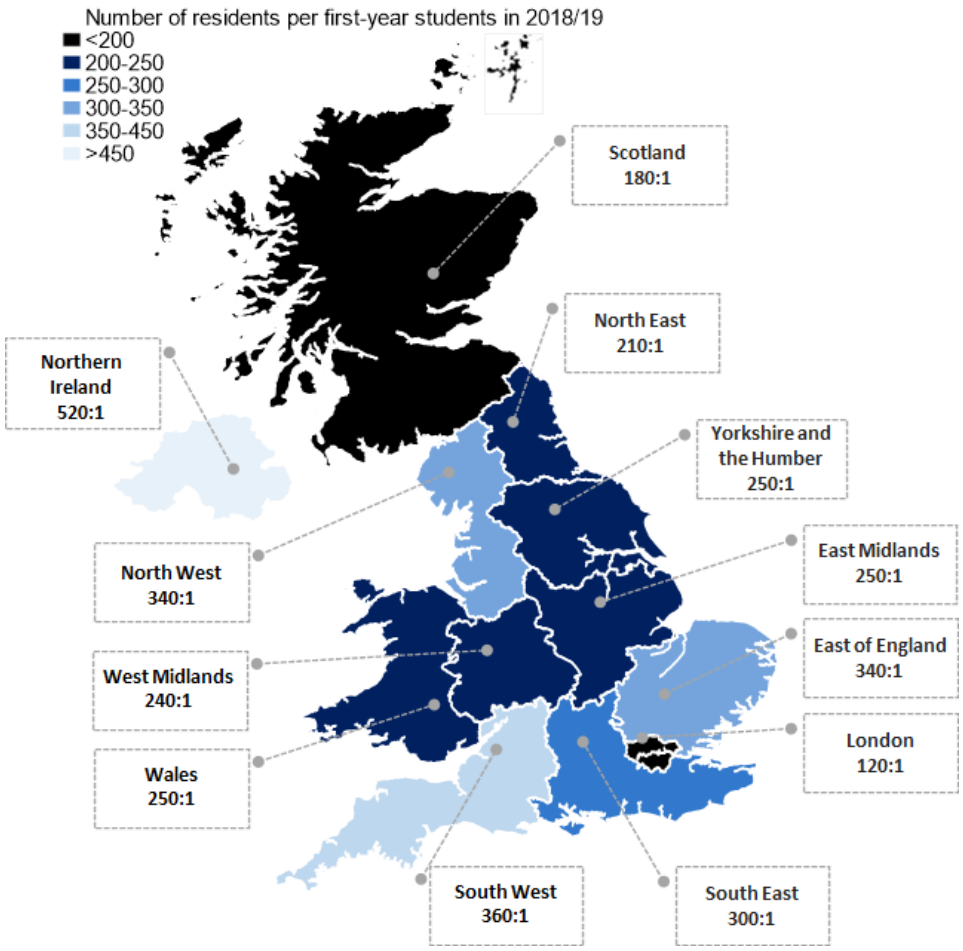
[21] See Office for National Statistics (2011b).

Figure 14 Number of international first-year students in 2018/19 – by region



Note: All student numbers are rounded to the nearest 5.
Source: London Economics' analysis of HESA (2021c)

Figure 15 Number of residents per international first-year student in 2018/19 – by region



Note: All numbers are rounded to the nearest 10.
Source: London Economics' analysis of HESA(2021c) and the 2011 Census population (Office for National Statistics, 2011b)

3 Methodological approach

3.1 Estimating impacts over the cohort's total study duration

Section 2 provided an overview of the number of students *starting* formally recognised qualifications or credit-bearing higher education modules at UK higher education institutions in the 2018/19 academic year. However, to aggregate the benefits and costs associated with this cohort, it is necessary to adjust the number of 'starters' to account for **completion/continuation rates**.

For this, we used information published by the Higher Education Statistics Agency (HESA) on non-continuation one year or two years after entry, for UK domiciled full-time and part-time first undergraduate students, respectively (on average, and broken down by young and mature entrants).[22,23] Combining this information on annual non-continuation rates with assumptions on the average duration by qualification level and mode (discussed below), we then calculated the proportion of students expected to continue their studies per year (by level and mode).

In terms of the assumptions on **duration of study**, as presented in Table 6, for full-time students, we assumed a typical study duration of **3 years** for full-time first degrees[24] and postgraduate research degrees, and a **1 year** duration for full-time postgraduate taught degrees and other undergraduate qualifications. To achieve comparable assumptions for part-time students, we adjusted these full-time study durations for the average study intensity amongst part-time students (estimated at **36%**).[25] Hence, we assume an average study duration of **8 years** for part-time first

[22] For more information, please refer to HESA (2021a). Data for full-time students are based on the 2018/19 cohort of students (i.e. those who entered in 2018/19), tracking where these students were in 2019/20 (i.e. 1 year after entry). Data for part-time students are based on the 2017/18 cohort of students (i.e. those who entered in 2017/18), again tracking where these students were in 2019/20 (i.e. 2 years after entry). Non-continuation rates for part-time students were then divided by 2 (i.e. we assume equal drop-out rates in the 1st and 2nd year of study). The non-continuation rates are based on the proportion of students no longer enrolled in HE; hence, this approach implicitly takes account of students who 'switch' between qualifications or transfer to a different institution as 'continuing' students.

[23] Note that, as the HESA data provide no comparable information for non-UK domiciled students, we have assumed that their completion rates are identical to those estimated for UK domiciled students. There is no completion rate information available for other undergraduate qualifications undertaken on a part-time basis – and thus it is assumed to be the same as for first degrees. Further note that the HESA information provides separate non-continuation rates for first degree and other undergraduate students, but excludes students at postgraduate level. To achieve assumptions for postgraduate students, we assume that students undertaking postgraduate research or taught degrees post the same non-continuation rates as *mature* first degree students.

[24] Although full-time honours degrees in Scotland are generally 4 years in duration, given the number of these awards as a proportion of all full time undergraduate degrees, for modelling purposes, we assume that all full time undergraduate degree are 3 years in duration.

[25] Given that HESA does not publish official statistics on part-time study intensity, we instead use information outlined in Callender and Thompson (2018) on the number of English domiciled undergraduate

degrees and postgraduate research degrees, respectively, and a **3 year** duration for part-time postgraduate taught degrees and other undergraduate qualifications.

Combining the assumed annual non-continuation rates with these assumed study durations, Table 6 also presents the completion rates assumed throughout the analysis.[26] We assume that of those students starting a full-time first degree at a UK higher education institution in 2018/19, approximately **92%** were expected to progress into the second year of study as intended (with the remaining **8%** discontinuing their studies), **84%** were expected to complete the second year, and **77%** were expected to complete their first degree as intended (after 3 years of study). The annual progression rate for part-time first degrees stands at **84%** *per year* (implying that approximately **25%** would be expected to complete their first degree as intended (after 8 years of study). The corresponding estimates for full-time postgraduate degrees (both taught and research) qualifications were assumed to be **87%** per year (compared to **84%** per year for part-time postgraduate degrees).

To assess the total impact associated with international students in the 2018/19 cohort, we then multiplied the assumed continuation rates per year by the estimated benefits and costs per year, to ensure that all estimates (per student and in aggregate) are adjusted for the proportion of students expected to continue their studies each year.

part-time entrants in all UK universities and English FE Colleges (excluding The Open University) in 2015/16, broken down into different study intensity bands (using HESA student records for UK universities and the Education and Individualised Learner Records for students registered at FE colleges). Based on this information, we estimate that part-time students study at an intensity equivalent to approximately **36%** (assuming the same study intensity across international students of all domiciles, studying anywhere in the UK, and at either undergraduate or postgraduate level).

[26] Note that the HESA 'first year marker' identifies those international students for whom it is their first year at a particular *university* and not necessarily first year on a particular *course*. A number of 'first-year' EU and non-EU undergraduates (i.e. according to their first-year marker) may be entering into the 2nd or 3rd year of a particular undergraduate course. As such, the results of the gross economic benefit per student may overestimate the true gross benefit.

Table 6 Assumed study duration and continuation rate per year - by level and mode of study

Study mode and level	Full-time students				Part-time students			
	Other undergraduate	First degree	Postgraduate degree (taught)	Postgraduate degree (research)	Other undergraduate	First degree	Postgraduate degree (taught)	Postgraduate degree (research)
Study duration	**1 year**	**3 years**	**1 year**	**3 years**	**3 years**	**8 years**	**3 years**	**8 years**
Year 1	84%	92%	87%	87%	84%	84%	84%	84%
Year 2		84%		75%	71%	71%	71%	71%
Year 3		77%		65%	60%	60%	60%	60%
Year 4						50%		51%
Year 5						42%		43%
Year 6						36%		36%
Year 7						30%		31%
Year 8						25%		26%

Note: Continuation rates for postgraduate students are based on mature entrants to first degrees.
Shaded areas indicate the proportion of students expected to complete their intended qualification (following the assumed average study duration for each level and mode of study).
Source: London Economics' analysis of HESA data (2021a)

3.2 Estimating the economic benefits associated with international students

There are a range of benefits associated with EU and non-EU domiciled students to the UK economy. From the perspective of higher education institutions, these predominantly relate to the **direct** economic benefits associated with international students' **tuition fees**, as well as the (equally significant) **indirect** and **induced** economic impacts associated with higher education institutions' spending of this fee income.

In addition to tuition fees, the UK economy benefits from the **non-tuition fee expenditure** of international students studying in the UK, as well as the **spending of visitors** (e.g. friends and family) coming to the UK to visit these students during their studies. Again, in addition to the direct impacts of this spending, the analysis presented here also considers the **indirect** and **induced** economic impacts on the UK economy associated with this expenditure. These occur through spending of companies in the supply chain of the goods and services bought, as well as the spending of wage income of staff in these supply chains buying goods and services from within the economy.

There are clearly a range of other benefits associated with international students, e.g. including the cultural diversity that they bring to the United Kingdom, the longer term business, investment and trade links, as well as the soft diplomatic power that the UK may exert across the globe.[27] In addition, at an operational level, the fee income received by higher education institutions increases the breadth and depth of the university education offer available to both UK domiciled and international students.[28] In addition, we do not include the additional Exchequer taxation receipts contributed by internationals students who enter the UK labour market post-graduation.[29] Similarly, we take no account of tax and National Insurance contributions made by international students' dependants while in the UK. The exclusion of these additional benefits implies that our analysis **underestimates** the true benefit of international students studying in the United Kingdom.

[27] See Higher Education Policy Institute (2020).
[28] See Olive, V., (2017).
[29] Further information on the contribution of international students to the UK Exchequer in the 10 years post-graduation amongst those that remain in the United Kingdom is presented in Box 1 (Section 4.4).

3.2.1 Direct economic impacts

Tuition fee income

To assess the level of tuition fee income per international student per year, we used data on the fee income received by UK higher education institutions[30] [31]in the 2018/19 academic year to estimate average fees charged per student per year (by study level, study mode, domicile and location of study[32]). Applying the assumptions relating to average study duration and completion rates, we then calculate the value of tuition fee income from the start of a student's learning aim until completion in today's money terms (i.e. the **discounted** stream of future benefits (in net present values and 2018/19 prices))[33], to arrive at the **average tuition fee income per student**.

Combining the estimated tuition fee income per student with the number of international students enrolled in higher education courses in the 2018/19 cohort, we then calculated the **aggregate tuition fee income associated with the 2018/19 cohort of international students**.

Non-fee income

In addition to the tuition fees, international students also incur significant expenditure on non-tuition fee related items whilst acquiring their qualifications. This includes spending on **accommodation costs** (rent, utility bills, etc.), **subsistence costs** (food, entertainment, personal items, etc.), **direct course costs** (textbooks, journal or library subscriptions, computer equipment, etc.), **facilitation costs** (e.g. course-related travel costs), and **spending on children** (including childcare that is not related to their study). Previous analyses have demonstrated that the level of non-tuition fee expenditure by international students is often

[30] In line with the information on the 2018/19 cohort of international students, this includes all publicly funded HEIs, as well as alternative providers.

[31] We have only included those scholarships that are administered through higher education institutions. There may be some scholarships that are provided directly to international students (i.e. via government schemes or charitable organisations); however, as there is no means of identifying these consistently, they have been omitted from the analysis.

[32] Specifically, we made use of information on aggregate fee income from new and continuing students in 2018/19 (HESA, 2021b) by domicile (i.e. EU vs. non-EU students), study mode, study level (i.e. undergraduate vs. postgraduate), and location (home nation) of study. To derive fee levels per *full-time* student per year, we divided the respective total levels of fee income by the underlying number of (first-year and continuing) students in 2018/19. To derive fee levels per *part-time* student (again by level, domicile, and location of study), we then multiplied the respective full-time fee rates by the assumed average study intensity amongst part-time students (see Section 3.1 (Footnote 25) for further detail).

[33] The real discount rate used adopted for this analysis was the HMT the Green Book rate of 3.5% (see HM Treasury, 2018). This was combined with 10-year Consumer Price Index (CPI) inflation forecasts (published by the Office for Budget Responsibility (2020 and 2021)) to convert all estimates into 2018/19 prices.

found to be comparable to tuition fee income[34], making non-tuition fee expenditure a significant component of the UK's export income from international students coming to study in the UK.

To analyse the level of non-tuition fee expenditure associated with the 2018/19 cohort of international students, we used estimates from the **2014/15 English Student Income and Expenditure Survey**[35] and the **2014/15 Welsh Student Income and Expenditure Survey**[36]. The surveys provide estimates of the average expenditure by *English and Welsh* domiciled students studying in England and Wales (respectively) on living costs, housing costs, participation costs (including tuition fees) and spending on children, for both full-time and part-time students.[37] For the purpose of this analysis, we made the following adjustments to the 2014/15 SIES estimates:

- We **excluded tuition fee expenditures** to avoid double-counting.
- We adjusted the resulting estimates for inflation to **reflect 2018/19 prices**.[38]
- Since the Student Income and Expenditure Surveys do not provide expenditure estimates for non-UK domiciled students or postgraduate students, our analysis assumed that non-tuition fee expenditure levels do not vary significantly between UK and international students (or between undergraduate and postgraduate students). Hence, we based our estimates for international students studying in England on the estimated expenditures of English domiciled students, and our estimates for international students studying in Wales on the expenditures of Welsh domiciled students.[39] We did however adjust the estimates for the assumed longer average stay durations in the UK for non-EU domiciled international students compared to EU-domiciled students (given geographic proximity and the general ease of travel).

  Specifically, using a similar approach as outlined by the Department for Business, Innovation and Skills (2011), we assume that **EU domiciled**

[34] E.g. see Department for Business, Innovation and Skills (2011) and London Economics (2018).
[35] See Department for Education (2018); the survey focused on English domiciled students studying in England or Wales.
[36] See Welsh Government (2018); the survey focused on Welsh domiciled students studying in England or Wales.
[37] The non-fee expenditure of international students studying in Scotland and Northern Ireland was assumed to be the same as for Welsh domiciled students (studying in England or Wales), given the lack of any recent estimates of the specific student expenditures for Scotland and Northern Ireland.
[38] Inflation estimates are based on quarterly CPI data published by the Office for National Statistics (2021a).
[39] Again, we assume the same level of expenditures for international students studying in Scotland and Northern Ireland as for international students studying in Wales (given the lack of recent estimates of student expenditures for Scottish and Northern Irish students).

postgraduate and **non-EU undergraduate and postgraduate students** spend a greater amount of time in the UK, on average, than prescribed by the duration of the academic year (39 weeks).[40] Hence, we assume that all postgraduate students (both EU and non-EU domiciled) spend **52 weeks** per year in the UK, as they write their dissertations during the summer. Further, we assume that non-EU domiciled and EU domiciled undergraduate students spend an average of **42** and **39 weeks** per year in the UK (respectively). The lower stay duration for EU undergraduate students reflects the expectation that these students, given the relative geographical proximity to their home countries and the resulting relative ease and lower cost of transport, are more likely to return home during holidays. These assumptions are summarised in Table 7.

- We further adjusted the estimates for any **foregone subsistence expenditures in the UK due to international students returning to their home countries during the Covid-19 pandemic** (and due to the suspension of in-person teaching across UK universities). Specifically, we assume that 50% of full-time students in the 2018/19 cohort returned home during the third (i.e. final) term of the 2019/20 academic year, and that 50% of full-time students in the cohort returned home during the second and third terms of the 2020/21 academic year.[41] We assume that, during this time, these students did not face any subsistence costs in the UK (e.g. on food, entertainment, etc.), but still incurred all other types of non-fee spending in the UK listed above (e.g. we assume that these students were still liable to pay any accommodation costs in the UK).

[40] In reality, there may be significant variation around these assumed average stay durations depending on individual students' circumstances, such as country of origin, parental income etc.

[41] In other words, we assume that due to the Covid-19 pandemic, the subsistence expenditures of full-time international students in the 2018/19 cohort were 17% lower in 2019/20 (i.e. 50% x 33%), and 33% lower in 2020/21 (i.e. 50% x 67%) than would otherwise have been the case. We assume that international part-time students in the cohort did *not* leave the UK due to the pandemic, given that part-time students typically combine their studies with work in the labour market. In addition, any full-time students with an assumed one-year study duration (including postgraduate taught qualifications and 'other undergraduate' qualifications) are not affected by these assumptions (since they are assumed to have completed their studies in the 2018/19 academic year). As a result, the majority of students in the 2018/19 cohort are not impacted by these Covid-19 adjustments. In total, these Covid-19 adjustments result in a **£0.7bn** reduction in the estimated net impact associated with the 2018/19 cohort of international students than would otherwise have been the case.

Table 7 Assumed average stay durations for international students (in weeks), by domicile and level of study

Level of study	Domicile	
	EU (non-UK)	Non-EU
Undergraduate	39 weeks	42 weeks
Postgraduate	52 weeks	52 weeks

Source: London Economics' analysis of Department for Business, Innovation and Skills (2011)

Again, we calculated the resulting non-tuition fee expenditure over the entire duration of students' higher education courses (discounted to reflect present values and 2018/2019 prices and adjusted for completion rates). The resulting estimates provide the **average non-tuition fee expenditure per student** in 2018/19 prices by level of study, mode, location (i.e. home nation) of study and domicile (EU or non-EU). Using the number of students enrolled in higher education courses in the 2018/19 cohort of international students, we then calculate the **aggregate non-tuition fee income associated with the 2018/19 cohort of international students**.

Visitor income

Alongside the expenditures of international students themselves, they attract friends and relatives to visit the United Kingdom – whose expenditures result in additional income to the UK economy. However, while there have been a number of previous studies that have attempted to incorporate the impact of income associated with international students' visitors[42], there is no reliable source of information on the number of visitors that international students attract. Therefore, to provide an estimate, our starting point was the **total number of and expenditures made by *all* visitors to the United Kingdom** in 2019, using information from the International Passenger Survey (IPS).[43]

Specifically, to estimate the **number of visitors who are 'student-related visitors'**, we calculated the share of first-year students from each international country in 2019 as a proportion of the total UK resident population in 2019 born in that same country.[44] For instance, if the resident population of a particular country was estimated to be 100,000 and there were 1,000 international students from that same country, then the resulting proportion would stand at 1%. The same process was undertaken separately for each of the 20 top countries of origin of

[42] For example, see London First and PwC (2014) and Oxford Economics (2014).

[43] Using information from Office for National Statistics (2020a), as with our previous study (London Economics (2018)), our approach follows the methodology for estimating the impact of international students in London by London First and PwC (2014).

[44] The resident population data are based on Office for National Statistics (2021b).

international students[45] (as well as in total for all other EU and all other non-EU countries).

The number of visitors visiting international students from each country was then estimated by applying the estimated proportion to the total number of visitors from that country indicating that their reason for travel was to visit friends or relatives in the United Kingdom.[46] For example, there were **818,000** Polish-born residents in the UK in 2019, and **3,575** first-year students from Poland enrolled in UK higher education in the 2018/19 academic year. Hence, first-year students from Poland were assumed to make up around **0.4%** of all Polish residents in the UK. As such, we assumed that **0.4%** of the **592,000** individuals from Poland visiting friends and relatives in the UK in 2018/19 were visiting students, and that these visits would not have occurred in the absence of international students from Poland.

We then divided the total spending of visitors by the total number of visitors in 2019 to calculate the **average spending per visitor** across the different countries/groups of countries, weighted by the estimated number of visitors to students by country of origin (to account for the potential variation in the wealth of visitors to the United Kingdom).

Using this approach, we estimated that in 2018/19, there were approximately **1.6** international visitors for every international first-year student enrolled in UK higher education, which equates to approximately **431,000** visitors to these students in 2018/19. In addition, the average expenditure associated with each of these visits was estimated at approximately **£760**. Note that the analysis is undertaken for each of the main countries of domicile within the 2018/19 cohort of international students, which should therefore account for the geographic proximity of different countries. Reflecting this, our analysis demonstrated that EU students typically attract more overseas visitors per year than non-EU students (**2.7** visits per EU student compared to **1.2** visits per non-EU student per year). However, non-EU visitors spent more on average during each visit (**£1,060**) compared to EU student visitors (**£330**).

[45] For more information on these top countries of domicile of international students in the 2018/19 cohort, please refer to Section 2.2. Note that it was not possible to replicate the analysis for *each* country of origin, given that there is no published information from HESA on the number of first-year non-UK students by country of domicile. Where either HESA data on first-year students or IPS visits data is not available, we group countries with 'missing' data together by domicile (e.g. China and Hong Kong were combined, as no split is provided between Hong Kong and China in the data on the UK resident population by country of birth).

[46] Based on visitor data published by the Office for National (2020a). This approach assumes that visitors visiting friends and family in the UK are always visiting people from their country of origin.

Note that because of the Covid-19 pandemic, we assumed that there were no visitors to international students either in the last term of the 2019/20 academic year or the entire 2020/21 academic year.[47]

Again, we then calculated the resulting visitor expenditure over the entire duration of students' higher education courses (again discounted to net present values and adjusted for study completion rates), to arrive at the **average visitor expenditure per student** in 2018/19 prices (by level of study, mode, and domicile). Combining this with the number of international students in the 2018/19 cohort, we then calculated the **aggregate visitor expenditure associated with the 2018/19 cohort of international students** across the United Kingdom.

3.2.2 Indirect and induced effects

There is a wide body of literature estimating the direct, indirect, and induced impact of higher education institutions' expenditures (and the spending of students) on universities' local, regional and national economies.[48] Assessments of these effects consider universities as economic units creating output within the local economy by purchasing products and services from their supply chains and hiring employees. Similar economic impacts apply to the non-fee expenditures of students and their visitors on consumer goods and services within the local economy. The direct, indirect, and induced economic impacts associated with the fee and non-fee spending of international higher education students in the UK and the spending of these students' visitors are defined as follows:

- **Direct effect:** This is captured by the above-discussed fee income (accrued by the higher education institutions), and non-fee income and visitor income (accrued by other organisations providing goods and services to international students and their visitors) associated with the 2018/19 cohort of international students studying in the UK.
- **Indirect effect ('supply chain impact'):** Universities and businesses providing other goods and services to international students and their visitors spend their income on purchases of goods and services from their suppliers, which in turn use this revenue to buy inputs (including labour) to meet these demands. This results in a chain reaction of subsequent rounds of spending across industries, often referred to as a 'ripple effect'.
- **Induced effect ('wage spending impact'**: University employees (supported by international tuition fee income) and the employees of companies

[47] The effect of this assumption was to reduce the net economic benefit associated with visitors to international students by approximately **£275 million** compared to what might otherwise have been the case in the absence of the pandemic.
[48] For example, London Economics (2017b).

providing goods and services to the international students and visitors use their wages to buy consumer goods and services. This in turn generates wage income for employees within the industries producing these goods and services, again leading to subsequent rounds of spending, i.e. a 'ripple effect' throughout the economy as a whole.

An analysis of the *net* impact of these effects on the UK economy ideally needs to account of two additional factors potentially reducing the size of any of the above effects:

- **Leakage** into other geographical areas, by taking account of how much of the additional economic activity actually occurs in the area of consideration; and
- **Displacement** of economic activity within the region of analysis, i.e. taking account of the possibility that the economic activity generated might result in the reduction of activity elsewhere within the region.[49]

The direct, indirect, and induced impacts were estimated using **economic multipliers** derived from Input-Output tables, which measure the total production output of each industry in the UK economy, and the inter-industry (and intra-industry) flows of goods and services consumed and produced by each sector. Specifically, we made use of existing economic multipliers associated with the expenditures of UK HEIs, their students, and their students' visitors, based on an analysis of the combined impact of the UK higher education sector by Oxford Economics (2017)[50]. The multipliers constitute Type II multipliers, capturing the aggregate impact on the UK economy arising from an initial injection relative to that initial injection - the total direct, indirect, and induced impacts associated with the expenditures of universities, students and overseas visitors to students relative to the direct level of these expenditures[51].

Given that international students' tuition fees are accrued as income (and subsequently spent) by higher education institutions themselves, we applied the multipliers associated with university expenditure to derive the total direct, indirect, and induced impacts associated with international students' **tuition fee income**. In addition, we applied the multipliers associated with student

[49] It is important to note that, while the analysis takes account of *leakage* (e.g. adjusting for the extent to which any additional income for supplying industries might be spent on imports of goods and services from outside the UK), the estimated impacts here are *not* adjusted for *displacement* or additionality (e.g. the extent to which the tuition fee, non-tuition fee, and visitor income associated with international students might otherwise have been used for other purposes). Hence, our analysis effectively estimates the direct, indirect, and induced impacts in *gross* terms.

[50] The study by Oxford Economics (2017) focused on the 2014-15 academic year.

[51] In mathematical terms, the multipliers are calculated as [(Direct impact + indirect impact + induced impact)/Direct impact].

expenditure and overseas visitor expenditure to our above-described estimates of **non-tuition fee student expenditure** and **overseas visitor expenditure**, respectively.

The assumed multipliers are presented in Table 8. To interpret these estimates, for example, the multiplier of **2.1** for student expenditure implies that each **£1 million** of (direct) non-fee expenditure by international students on goods and services generates a total of **£2.1 million** of economic impact throughout the UK economy.

Table 8 Assumed economic multipliers by type of international student expenditure

Type of expenditure	Total impact per direct impact
University expenditure (applied to tuition fee income)	2.5
Student expenditure (applied to non-fee income)	2.1
Overseas visitor expenditure (applied to visitor income)	1.9

Note: Note that these multipliers were not stated explicitly in Oxford Economics' study but were instead calculated based on the aggregate impact estimates provided.
Source: London Economics' analysis of Oxford Economics (2017)

3.2.3 Level of analysis

Economic multipliers of the above type are typically estimated at different geographical levels, e.g. estimating the impact of economic activities at the regional level or for the UK economy as a whole. Throughout this analysis, rather than estimating the impact of the tuition fee, non-tuition fee, and visitor income associated with international student on each of the local economies within which these students reside during their studies, we estimated the **aggregate direct, indirect, and induced economic impact of this income on the UK economy as a whole**. This aggregate UK-wide impact is subsequently allocated by **region** according to the location of the institutions they attend.

To provide further information on the contribution at a more **local level**, this regional contribution of international students to UK economic activity was then further allocated **by parliamentary constituency**, according to the overall distribution of the UK student population by constituency. Specifically, given the lack of specific information on the residence of *international higher education students* in the UK at the parliamentary constituency level[52], we instead made use of information from the 2011 Census on the total number of full-time students

[52] A Parliamentary Question on the issue (tabled in September 2017) confirmed that 'there is currently no source of data available which provides information on international students residing in each parliamentary constituency within the UK' (see UK Parliament, 2017).

(aged 18 to 74) that are 'usually resident' in each parliamentary constituency across the UK.[53] Usual residents in the Census are defined as anyone who, on Census day, was in the UK and had stayed or intended to stay in the UK for a period of 12 months or more.[54] While this is the only publicly available information on students' residency by constituency, it is important to note that the data:

- Is **relatively outdated** (as the last UK Census for which data is currently available for subsequent analysis was undertaken on 27 March 2011[55]);
- Focuses on **full-time students only** (though only 7% of the 2018/19 cohort of international students were undertaking qualifications on a part-time basis[56]);
- Includes ***both* UK domiciled as well as non-UK domiciled students** (based on the above definition of 'usual residents')[57];
- Includes students undertaking qualifications **at any level of education** (rather than higher education students only); and
- Includes students at **any age between 18 and 74**.

The general effect of these assumptions will be to reduce the concentration of economic contribution in and around higher education institutions and spread the effect more widely across the country. Estimating the public purse costs associated with international students

3.2.4 Public teaching grant costs

UK higher education institutions receive public **teaching grant funding** to support the costs of their teaching activities in specific areas (e.g. to widen access amongst socially disadvantaged students, or to support the higher resource required to teach part-time students or students studying high-cost subjects). Teaching grants are paid to universities located in England, Wales, Scotland and Northern Ireland by the **Office for Students**, the **Higher Education Funding Council for Wales**, the **Scottish Funding Council**, and the **Department for the Economy for Northern Ireland**, respectively. Note that this funding applies to UK and EU domiciled

[53] See Office for National Statistics (2011a).
[54] For more information this definition, see Office for National Statistics (2014).
[55] In this respect, note that a number of universities would have been outside of term time on the Census date. However, the results from the Census provide information on the *usual* address of individuals (as well as the reason for multiple addresses (i.e. student, armed forces, etc.)), implying that the data will generally reflect the in-term residence arrangements of students.
[56] See Section 2.3.
[57] Note that, given the difference in the number of UK and non-UK domiciled students, the data primarily reflects the residency of UK domiciled students, and as such, the analysis by parliamentary constituency will not reflect the true picture in some constituencies - especially where there may be a particularly high concentration of international students.

students only and is not available to support the costs of teaching provision for non-EU domiciled students.

To estimate the level of teaching grant per student (by study mode and home nation of study), we divided HESA information on the total amount of teaching grant paid by each of the above funding bodies by the total number of UK and EU domiciled first year and continuing students enrolled with universities located in each of the home nations in 2018/19[58] (excluding any non-EU domiciled students and all postgraduate research students, since there is no teaching grant funding associated with these students). Teaching grants per part-time student were adjusted for the average assumed study intensity amongst part-time students.[59]

Calculating the total teaching grant costs over the total study duration (in 2018/19 prices and in net present value terms), and adjusting for completion rates per year, we arrived at an estimate of the **average teaching grant costs per student.** Combining this with the number of students in the 2018/19 cohort of international students, we then estimated the **aggregate teaching grant costs associated with the 2018/19 cohort of international students**.

3.2.5 Costs of public student support

As an additional cost to the UK Exchequer, EU domiciled students studying in any of the four UK home nations were eligible for **tuition fee support** provided by the **Student Loans Company** (SLC) (for students studying in England, Wales, or Northern Ireland) and the **Student Awards Agency for Scotland** (SAAS) (for students studying in Scotland). This support includes[60]:

- Non-repayable tuition fee grants provided to eligible EU domiciled full-time and part-time undergraduate students studying in Scotland, and part-time undergraduate students studying in Northern Ireland; and
- Repayable tuition fee loans provided to eligible EU domiciled:

[58] See HESA (2021b) for the financial data on teaching grant funding, and HESA (2021c) for the number of students enrolled in 2018/19.

[59] Again, the assumed part-time study intensity was based on estimates presented in Callender and Thompson (2018); again, see Footnote 25 for further detail.

[60] To estimate the average fee grant and fee loan per student, the analysis makes use of *average* levels of support paid per EU domiciled student, separately by location of study, study mode and level, based on publications by the Student Loans Company on student support paid in 2018/19 for higher education in England, Wales, and Northern Ireland (see Student Loans Company 2019a, 2019b and 2019c), and the Student Awards Agency for Scotland on student support for higher education in Scotland (see SAAS, 2019). Wherever possible, we focus on the average level of support for EU students only (rather than Home and EU students combined), on support provided to students attending public providers only, and for the most recent cohorts possible. Further, and again wherever possible, we adjusted the average levels of fee loans for average loan take-up rates.

- Full-time and part-time undergraduate students studying in England, Wales, and Northern Ireland[61]; and
- Full-time and part-time postgraduate students studying in any of the four home nations[62],

The Exchequer cost associated with tuition fee loan support equals the **Resource Accounting and Budgeting Charge** (RAB Charge), capturing the proportion of the loan that is expected not to be repaid. Given the differing approach to student support funding for EU domiciled students in each of the UK home nations, the student support costs to the Exchequer were assessed separately for students studying in each of the four home nations (as well as by qualification level and study mode).[63]

Again, we calculated the Exchequer cost of student provision over the total expected study duration of international students in the 2018/19 cohort (in net present value terms in 2018/19 prices), adjusted for completion rates, to arrive at an estimate of the **average student support costs per (EU domiciled) student**. Aggregating across the number of EU students in the 2018/19 cohort, we thus estimated the **total Exchequer cost of student support associated with the 2018/19 cohort of international students.**

[61] EU part-time undergraduate students could access a combination of tuition fee grants and tuition fee loans.

[62] This includes Masters and Doctorate loans available to EU students studying in England and Wales; the Postgraduate Students' Allowance Scheme for students studying in Scotland; and postgraduate tuition fee loans for students studying in Northern Ireland.

[63] For **full-time undergraduate students**, we have assumed a RAB charge of **53%** associated with tuition fee loans for EU students studying in England (based on estimates published by the Department for Education (2020b)); approximately **40%** for EU students studying in Wales (based on estimates provided by the Welsh Government); and **31%** for EU students studying in Northern Ireland (based on estimates from Audit Scotland (2020)), where we assume the same RAB charge as for full-time postgraduate students studying in Scotland, given the similar loan balance). EU students studying in Scotland were eligible to receive a tuition fee grant covering the entire fee, without any fee loan support.
For **part-time undergraduate students**, we have assumed a RAB charge of **45%** for EU domiciled students studying in England; approximately **35-40%** for EU students studying in Wales; and **0%** for EU students studying in Northern Ireland (given that these students have a very small loan balance). Again, EU students studying in Scotland were eligible to receive a tuition fee grant, but no fee loan support.
For the loans for **postgraduate taught students** studying in England and Northern Ireland, we have assumed a RAB charge of **0%** for both full-time and part-time students (based on the Department for Education's (2020b) student loan forecasts for English Masters loans). For students studying in Wales, we have assumed a RAB charge of approximately **10-15%** (again based on information provided by the Welsh Government). For students studying in Scotland, we assume a **31%** RAB charge (based on Audit Scotland (2020)). Finally, for (full-time and part-time) **postgraduate research students**, we assumed a RAB charge of **42%** for students studying in England (again based on based on Department for Education (2020b)), and of between **40-45%** for students studying in Wales (again based on information provided by the Welsh Government). There were no loans available for EU postgraduate research students studying in Scotland or Northern Ireland.

3.2.6 Other public costs

As a final additional cost to the public purse, the analysis takes account of the costs associated with the provision of **'other' public services** to international students and their dependants joining them in the UK, including:

- **Public healthcare** (net of any NHS Immigration Health Surcharge/Levy);
- **Housing** and **community amenities**;
- Pre-primary, primary and secondary level **education** received by dependent children;
- **Social security benefits**;
- **Other public services** (including **public order** and **safety**; **defence; economic affairs**; **recreation**, **culture**, and **religion**; **environmental protection**, and **other general public services**);
- '**Non-identifiable' public expenditure** incurred on behalf of the UK as a whole (such as expenditure relating to the **servicing of the national debt**); and
- **Expenditure on overseas activities** (i.e. diplomatic activities etc).

These costs were primarily based on data from Public Expenditure Statistical Analyses (PESA) published by HM Treasury (2020), and supplemented with more specific information for international students and their dependants where possible/available.

Estimating the number of dependants per student

In order to estimate the size of these public costs associated with international students and their dependants, it was necessary to estimate the number of child and adult dependants per EU and non-EU domiciled student enrolled in UK higher education.

EU domiciled students are (currently) able to bring in dependants to the UK. We used the information on students' household composition from the **2014/15 English** and **Welsh Student Income and Expenditure Surveys** (see Section 3.2.1), separately by study mode[64], combined with the **total fertility rate**[65], to estimate the number of child and adult dependants per household.

[64] As with students' non-fee expenditures (see Section 3.2.1), we assume the same household composition for students in Scotland and Northern Ireland as for students studying in Wales (based on Welsh Government, 2018).
[65] See Office for National Statistics (2020b).

Our analysis implicitly assumes that the composition of households does not vary significantly between UK and EU students or between undergraduate and postgraduate students; that all adult and child dependants have the same domicile as the student; and that all adult and child dependants are *additional* to the UK – i.e. they would not have come to the UK other than to join their relative coming to the UK to undertake higher education.[66] Table 9 presents the resulting estimated number of adult and child dependants per 100 EU domiciled students, separately by study mode and location (i.e. home nation) of study.

Table 9 Estimated number of adult and child dependants per 100 EU domiciled students, by study mode and location of study

Type of dependant	England		Wales		Scotland		Northern Ireland	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Adult dependants	11	52	14	55	14	55	14	55
Child dependants	15	59	17	73	17	73	17	73

Note: We assume the same household composition for EU students studying in Scotland and Northern Ireland as for EU students studying in Wales. We further assume the same number of dependants per student for both undergraduate and postgraduate students.

Source: London Economics' analysis of Office for National Statistics (2020b), Department for Education (2018), and Welsh Government (2018)

Unlike EU domiciled students, **non-EU students** face restrictions on the extent to which they are allowed to bring their dependants to the UK with them. Bar some exceptions, only postgraduate non-EU students are allowed to bring dependants to the UK.[67]

Based on immigration statistics published by the UK Home Office[68] and the number of first-year non-EU undergraduate and postgraduate students in 2018/19, we estimated that there are approximately **10** dependants per 100 non-EU

[66] Our approach is conservative; for example, dependants may not be additional to the UK economy if they live in households with EU domiciled individuals who would already be residing in the UK prior to their studies. Further, while we include the *costs* of EU student dependants, we do not include the *benefits* of EU student dependants who may be working in the UK (e.g. in terms of the additional income tax revenue generated).

[67] Undergraduate non-EU students could bring in dependants if they were studying on a government sponsored program. See Home Office (2017).

[68] See Home Office (2019). We divided the number of dependant visas issued associated with Tier 4 student visas in 2019 (**16,047**) by the number of Tier 4 general student visas issued in the same year (**256,379**). The information relates to 'general' Tier 4 student visas only, and excludes any information in relation to Tier 4 child students.

postgraduate students (and **no** dependants for non-EU *undergraduate* students as these students are ineligible to bring dependants to the UK during study). Averaging across the relative proportions of undergraduate and postgraduate students coming to the UK to undertake their studies, this implies that there are approximately **6** adult or child dependants for each 100 (undergraduate or postgraduate) non-EU students.

To achieve a breakdown of the number of dependants into child and adult dependants, we then assume that non-EU domiciled students have the same relative proportions of child and adult dependants as EU domiciled students (as above – see Table 9). Table 10 presents the resulting estimated number of adult and child dependants coming to the UK per 100 non-EU domiciled students, by study level, mode, and location of study. Reflecting the different immigration rules for non-EU students, these estimates are considerably lower than the comparable numbers for EU students.

Table 10 Estimated number of adult and child dependants per 100 non-EU domiciled students, by study mode, level, and location of study

Type of dependant	England		Wales		Scotland		Northern Ireland	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Undergraduate students								
Adult dependants	-	-	-	-	-	-	-	-
Child dependants	-	-	-	-	-	-	-	-
Postgraduate students								
Adult dependants	4	5	5	4	5	4	5	4
Child dependants	6	5	5	6	5	6	5	6

Note: Apart from some exceptions, the visa restrictions for non-EU undergraduate students do not allow them to bring dependants to the UK with them.

Source: London Economics' analysis of Home Office (2019) and HESA (2021c)

Health

In terms of the costs of public healthcare provision by the National Health Service (NHS), **EU students and their dependants** entering the UK are (currently) generally either in possession of a European Health Insurance Card granting the right to

healthcare in the UK, or private health insurance (making them ineligible for NHS healthcare).[69] Given the lack of available data on the actual take-up of private health insurance by EU students and their dependants, we assumed that all EU students and dependants take up public UK healthcare through the NHS.

All **non-EU students** and their dependants are eligible for UK public healthcare, but they must pay a compulsory annual NHS Immigration Health Surcharge (HIS) of **£300** towards their healthcare costs.[70] Non-EU students and their dependants might also subscribe to private health insurance – but again, given the lack of available data on this, we assume that all non-EU students and dependants have access to NHS healthcare.

The assumed cost of NHS healthcare provision for international students was based on an analysis by the Department for Health and Social Care (undertaken in 2018), estimating the annual cost of to the NHS healthcare per IHS-paying migrant per year at **£480**.[71] We assumed the same level of cost per head for non-EU students' dependants, as well as for EU domiciled students and their dependants. In addition, we assumed that these costs – originally estimated for the NHS in England – are the same for international students and their dependants residing in Wales, Scotland, or Northern Ireland.

Based on the above information, we estimated that the net public healthcare cost associated with international students in the 2018/19 cohort per year is **£480** per EU student or EU dependant, and **£180** for a non-EU student or dependant (i.e. £480 minus the £300 NHS Immigration Health Surcharge).

Education provision (for child dependants)

The public sector costs of higher education provision for international students in the 2018/19 cohort are already accounted for in the teaching grant costs and student support costs described above (see Sections 3.2.4 and 3.2.5). However, in addition, child dependants of both EU and non-EU students are eligible to access the UK education system.[72] To take account of this, based on the above-discussed PESA data, our analysis of the costs associated with international students' child

[69] For more information, see UK Council for International Student Affairs (2017).
[70] This relates to the value of the NHS Immigration Health Surcharge as of 1st January 2019 see House of Commons (2020). In October 2020, the levy was increased to £470; however, throughout the analysis, we assume a levy of £300 per student per year throughout each year of study of international students in the 2018/19 cohort.
[71] In 2018/19 prices. See House of Commons (2020) and Home Office (2018) for more information.
[72] See Home Office (2016).

dependants includes the public purse costs of pre-primary, primary and secondary education per member of the eligible population.[73]

Social security

To inform assumptions on the average public costs per student of providing social security to EU students[74], we again used estimates provided by the **2014/15 English** and **Welsh Student Income and Expenditure Surveys**[75], in terms of the average income from social security benefits per full-time and part-time student. Again, these surveys focus on English and Welsh domiciled students specifically, and our analysis implicitly assumes that EU students studying in England or Wales receive the same average level of social security benefits as English and Welsh students (studying in England or Wales), respectively. Also, given the lack of recent data for Scotland and Northern Ireland, our assumptions for EU students studying in Scotland and Northern Ireland are based on the estimates for EU students studying in Wales.

In terms of EU students' dependants, while we exclude any (likely very small) costs of social security entitlements for child dependants, for the adult dependants of EU students, we assume the same public costs of social security per head as for students themselves.

Other public services

In addition to the costs of public healthcare, social security, and education, we also included:

- The costs associated with a range of **other public services**, including **housing and community amenities**; **public order and safety**; **defence**[76]; **economic affairs**; **recreation, culture, and religion**; **environmental protection**; and **other general public services not classified above**; and

[73] Specifically, we divided the total UK public expenditure on pre-primary, primary, and secondary education (separately for each region; see HM Treasury (2020)) by the number of children aged 2–18 residing in each region in 2019 (see Office for National Statistics (2021c)).
[74] Non-EU students are generally not eligible to apply for social security benefits while studying in the UK.
[75] The average level of security benefits estimated by the surveys include state benefits such as Child Benefit, Child Tax Credit, Carer's Allowance, Employment and Support Allowance, any disability/invalidity/incapacity or sickness benefit, Working Tax Credit, Job Seekers Allowance and other unemployment benefits, Income Support, Housing Benefit, and Local Housing Allowance. For more information, see Department for Education (2018) and Welsh Government (2018).
[76] Note that these public costs of defence refer to 'identifiable' expenditure on defence only, i.e. in terms of the level of public expenditure that could be apportioned to each UK region. The majority of defence expenditure is 'non-identifiable' (i.e. could not be assigned to a particular region, but instead applies to the UK as a whole).

- '**Non-identifiable' public sector costs** in the PESA data that could not be attributed to particular regions (but instead apply to the UK as a whole), as well as **public expenditure on overseas** (e.g. diplomatic) activities.

To estimate these additional costs per EU and non-EU domiciled student, and per associated adult and child dependant, we added the estimates (per head) for each of these cost items contained separately within the PESA data.

Total 'other' public costs

Combining the estimated costs associated with all of the above public services, we estimated the total 'other' public sector costs per student, adult dependant, and child dependant per year – by region (where available/applicable), domicile, and study mode.[77]

In Table 11, we present the total wider Exchequer costs associated with the provision of the above-discussed public services to international students **per head** (i.e. per student/dependant) and **per year** – broken down into students/adult dependants and child dependants and by student domicile. For illustration, the table is based on students studying in the **East of England** only (since the majority of these 'other' public costs are broken down by region within which the different services are incurred).

The table illustrates the above-discussed **differences in eligibility** (as well as level of cost) depending on international students' domicile, study mode, as well as the type of dependant considered:

- As outlined above, while the Exchequer cost associated with NHS **healthcare** provision for EU domiciled students (and their dependants) stands at **£480** per student per year (without any financial contribution from students themselves), the cost associated with non-EU domiciled students (and their dependants) is partially offset by the compulsory NHS Immigration Health Surcharge, resulting in a net public cost of **£180** per head year.
- In contrast to EU domiciled students, non-EU domiciled students are not eligible for **social security benefits**. In addition, amongst EU students, note that **part-time students** are entitled to a larger range of social security benefits than full-time students (resulting in differences in the average social security cost by study mode), and that these costs apply to **students and adult dependants only** (but not child dependants).

[77] For a full breakdown of these costs for each region in the UK, please refer to Table 23 and Table 24 in Annex A2.1.

- While many of these public costs also apply to child dependants, a key difference between students/adult dependants and child dependants is that we have assumed that child dependants are likely to be in either pre-primary, primary of secondary-level **education**, which is associated with an additional Exchequer cost of **£5,395** per child per annum in the East of England.

Table 11 Costs of 'other' public service provision per student or adult/child dependant per year in the East of England, by type of service, domicile, and study mode

Type of service and mode	Per student/adult dependant		Per child dependant	
	EU	Non-EU	EU	Non-EU
Full-time students				
Health[1]	£480	£180	£480	£180
Education[2]	-	-	£5,395	£5,395
Social security	£413	-	-	-
Housing	£129	£129	£129	£129
General public services	£107	£107	£107	£107
Defence	£1	£1	£1	£1
Public order & safety	£373	£373	£373	£373
Economic affairs	£830	£830	£830	£830
Environment protection	£150	£150	£150	£150
Recreation, culture & religion	£83	£83	£83	£83
Non-identifiable & overseas[1]	£2,041	£2,041	£2,041	£2,041
Total	**£4,607**	**£3,894**	**£9,589**	**£9,289**
Part-time students				
Health[1]	£480	£180	£480	£180
Education[2]	-	-	£5,395	£5,395
Social security	£1,444	-	-	-
Housing	£129	£129	£129	£129
General public services	£107	£107	£107	£107
Defence	£1	£1	£1	£1
Public order & safety	£373	£373	£373	£373
Economic affairs	£830	£830	£830	£830
Environment protection	£150	£150	£150	£150
Recreation, culture & religion	£83	£83	£83	£83
Non-identifiable & overseas[1]	£2,041	£2,041	£2,041	£2,041
Total	**£5,638**	**£3,894**	**£9,589**	**£9,289**

Note: All values constitute annual costs per head, presented in 2018/19 prices. Totals may not sum due to rounding. [1]Indicates costs which do not differ between regions (due to a lack of breakdown in the underlying data). [2]The costs of pre-primary, primary and secondary education are applicable to child dependants only.

Source: London Economics' analysis of various sources

Adding the costs across all of these public services, the total 'other' public sector cost for a full-time (undergraduate or postgraduate) EU domiciled student or associated adult dependant stands at **£4,607** per year, compared to **£3,894** per non-EU domiciled student (due to the difference in eligibility for social security benefits and the Immigration Health Surcharge paid by non-EU students). Driven by the additional costs of educational services, the corresponding costs per child dependant stand at **£9,589** per EU domiciled child dependant and **£9,289** per non-EU domiciled child dependant, respectively.

Again, we then calculated the above costs over the total study duration, and adjusted for completion rates per year and the estimated number of adult and child dependants per student (see Table 9 and Table 10), and applied the relevant discount rate to calculate net present values. We thus arrived at an estimate of the average '**other' public costs per student (over the total study duration)**, and aggregated across the cohort to estimate the **total level of other public costs associated with the 2018/19 cohort of international students**.

4 The economic benefits associated with international students

4.1 Tuition fee income

Table 12 presents our estimates of the total direct, indirect, and induced impact on the UK economy of the **tuition fee income** associated with international students in the 2018/19 cohort, *per student* and in total, over their total expected study duration. This is presented separately by domicile (i.e. EU and non-EU) and level of study.

The average direct, indirect, and induced economic impact associated with tuition fee income was estimated to be approximately **£37,000** per **EU student** (across all levels of study). As expected, there is significant variation around this mean depending on the nature of the qualification (and the associated duration of study). In particular, the total impact associated with the tuition fee income of a typical EU student undertaking a first degree was estimated at **£53,000**, while the total economic impact associated with an EU student undertaking a postgraduate taught degree was estimated at **£17,000**. 'Other' undergraduate and postgraduate research qualifications were associated with a **£15,000** and **£42,000** benefit, respectively.

Table 12 Impact of tuition fee income associated with the 2018/19 cohort, by level of study and domicile

Level of study	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Other undergraduate	£15,000	£34,000	**£30,000**	£0.1bn	£0.4bn	**£0.5bn**
First degree	£53,000	£104,000	**£87,000**	£1.8bn	£6.7bn	**£8.5bn**
Postgraduate (taught)	£17,000	£36,000	**£33,000**	£0.4bn	£4.4bn	**£4.8bn**
Postgraduate (research)	£42,000	£91,000	**£77,000**	£0.2bn	£1.0bn	**£1.2bn**
Average	**£37,000**	**£60,000**	**£55,000**			
Total				**£2.4bn**	**£12.5bn**	**£15.0bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.

Source: London Economics' analysis

Reflecting the higher tuition fees charged to **non-EU domiciled students**, the impact on the UK economy associated with the tuition fee expenditure of a typical non-EU student was estimated to be **£60,000**. Again, reflecting the differences in duration of study, for first degrees, the impact was estimated to be **£104,000**, compared to **£34,000**, **£36,000**, and **£91,000** associated with 'other'

undergraduate, postgraduate taught, and postgraduate research degrees, respectively.[78]

Aggregating across the entire 2018/2019 cohort of first-year international students, the total economic impact of the tuition fee income generated by the cohort was estimated at approximately **£15.0bn**. Of this total, approximately **£2.4bn** was generated by EU students, with the remaining **£12.5bn** generated by non-EU students.

4.2 Non-fee income

As discussed above (see Section 3.2.1), the **non-tuition fee expenditures** of international students constitute a significant component of the economic impact generated by these students.

As presented in Table 13, the average direct, indirect, and induced impact of the non-tuition fee expenditures of EU domiciled students in the 2018/19 cohort over their total study duration was estimated to be **£54,000** per student, while the corresponding estimate for non-EU domiciled students stands at **£46,000** per student. Unlike the impact of tuition fees (see Section 4.1), the reason for the impact of non-tuition fee expenditures generated by EU students exceeding that of non-EU students relates to the composition of the student cohort, where EU students are more likely to undertake part-time qualifications and first degrees as compared to non-EU students (which results in non-tuition fee expenditures taking place over a longer period of time).[79]

[78] In addition to level and domicile, a more detailed breakdown of these estimates by study mode is provided in Annex A2.2.

[79] See Table 5 in Section 2.3 for a detailed breakdown of the number of international students in the 2018/19 cohort by domicile, level and mode of study.

Table 13 Impact of non-fee income associated with the 2018/19 cohort, by level of study and domicile

Level of study	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Other undergraduate	£56,000	£52,000	**£53,000**	£0.2bn	£0.7bn	**£0.9bn**
First degree	£60,000	£64,000	**£63,000**	£2.0bn	£4.1bn	**£6.2bn**
Postgraduate (taught)	£40,000	£33,000	**£34,000**	£0.9bn	£3.9bn	**£4.9bn**
Postgraduate (research)	£81,000	£76,000	**£77,000**	£0.4bn	£0.9bn	**£1.2bn**
Average	**£54,000**	**£46,000**	**£48,000**			
Total				**£3.5bn**	**£9.6bn**	**£13.1bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.
Source: London Economics' analysis

Again, these estimates vary considerably by level of study. Students undertaking postgraduate research degrees generated the largest non-tuition fee expenditure impact per student (**£81,000** per EU domiciled student and **£76,000** per non-EU student). In comparison, reflecting the differences in duration of study, for a typical EU domiciled student undertaking a first degree, the total economic impact associated with non-tuition fee expenditure was estimated at **£60,000** with the comparable estimate for non-EU students standing at **£64,000**.

The total direct, indirect, and induced economic impact associated with the non-tuition fee income generated by international students in the 2018/19 cohort (over their entire study duration) was estimated at **£13.1bn**.[80] The majority (**£9.6bn**) of this impact was generated by non-EU students, with EU domiciled students contributing the remaining **£3.5bn**.

4.3 Visitor income

As presented in Table 14, the direct, indirect, and induced economic impact associated with the expenditures of visitors to international students stood at approximately **£2,000** per EU domiciled student and **£3,000** per non-EU student in the 2018/19 cohort, on average. The relatively higher estimates for non-EU domiciled students are driven by the higher average expenditure per visit incurred by these visitors.

[80] In the previous analysis (for the 2015/16 cohort; see London Economics (2018)), the non-tuition fee expenditure accrued from international students was associated with a £12.1bn economic benefit, compared to £11.5bn associated with tuition fee income (in 2018/19 prices). In addition to an increase in average tuition fees charged to non-EU students and EU postgraduate students, one of the reasons for the reversal in the relative size of these impacts is the assumed reduction in non-tuition fee expenditure by international students as a result of the Covid-19 pandemic (see Section 3.2.1 for more information).

Considering differences by study level, the estimates associated with EU domiciled and non-EU domiciled students undertaking first degrees stood at **£3,000** and **£4,000** per student, respectively, while the corresponding estimate associated with students undertaking postgraduate taught degrees were estimated to be **£2,000** (for both EU and non-EU domiciled students)

Table 14 Impact of visitor income associated with the 2018/19 cohort, by level of study and domicile

Level of study	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Other undergraduate	£2,000	£3,000	**£3,000**	£0.0bn	£0.0bn	**£0.0bn**
First degree	£3,000	£4,000	**£3,000**	£0.1bn	£0.2bn	**£0.3bn**
Postgraduate (taught)	£2,000	£2,000	**£2,000**	£0.0bn	£0.3bn	**£0.3bn**
Postgraduate (research)	£3,000	£4,000	**£3,000**	£0.0bn	£0.0bn	**£0.1bn**
Average	**£2,000**	**£3,000**	**£3,000**			
Total				**£0.1bn**	**£0.6bn**	**£0.7bn**

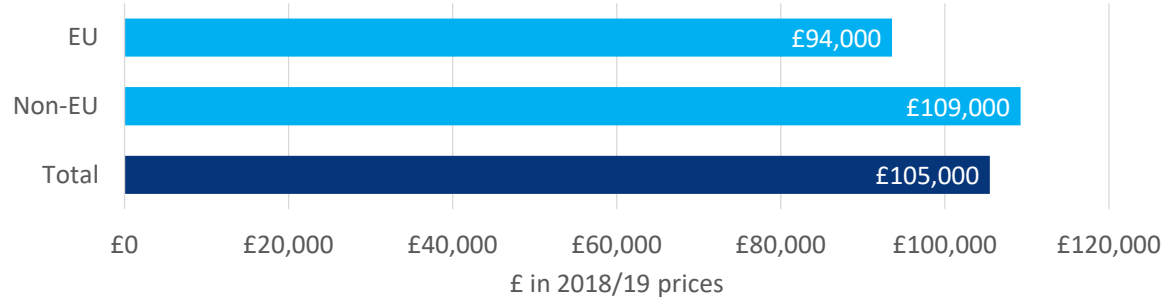
Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.
Source: London Economics' analysis

Aggregating across the total 2018/19 cohort of international students, the total direct, indirect, and induced impact of the expenditures of friends and family visiting international students (over the duration of their studies) was estimated to be approximately **£0.7bn**, of which **£0.1bn** was associated with EU domiciled students, and **£0.6bn** was associated with non-EU students.

4.4 Total benefits

Combining the above impacts associated with tuition fee, non-fee, and visitor income, the analysis estimates that the total benefit to the UK economy associated with a **typical EU domiciled student** was approximately **£94,000** per student, with the comparable estimate for **non-EU students** standing at approximately **£109,000** (see Figure 16). As discussed above (see Section 4.1), the difference between the two estimates is primarily driven by the relatively higher tuition fees charged to non-EU domiciled students as compared to students from (other) EU countries studying at UK HEIs.

Figure 16 Total benefit per student associated with the 2018/19 cohort, by domicile



Note: Values per student are rounded to the nearest £1,000. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding. ***Source: London Economics' analysis***

Aggregating across the entire 2018/2019 cohort of first-year students, the total economic benefits of international students in the cohort to the UK economy were estimated at approximately **£28.8bn**, of which **£6.1bn** is generated by EU students, and the remaining **£22.7bn** is generated by non-EU students (Table 15).

Table 15 Total benefits associated with the 2018/19 cohort, by domicile and type of benefit

Type of benefit	EU	Non-EU	Total
Fee income	£2.4bn	£12.5bn	**£15.0bn**
Non-fee income	£3.5bn	£9.6bn	**£13.1bn**
Visitor income	£0.1bn	£0.6bn	**£0.7bn**
Total	**£6.1bn**	**£22.7bn**	**£28.8bn**

Note: Values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.
Source: London Economics' analysis

Box 1 Post-graduation benefits

There are sizeable economic contributions made by international students who studied in the UK and enter and remain in the UK labour market *post-graduation*. Based on research undertaken by London Economics (2019) for the Higher Education Policy Institute and Kaplan International Pathways, the analysis (based on the 2016/17 cohort of international students) illustrates that:

- The total post-graduation contribution to the UK Exchequer associated with international students in the 2016/17 cohort was estimated to be approximately **£3.3bn** in present value terms (in 2018/19 prices).[81]
- In terms of source of benefit, this includes **£1.1bn** in income tax, **£0.7bn** in employee National Insurance contributions, **£0.9bn** in employer National Insurance contributions, and **£0.6bn** in VAT contributions.
- In terms of study level, the largest amount was contributed by first degree holders (**£1.2bn**) and graduates with postgraduate taught qualifications (**£1.6bn**), with a further **£0.3bn** contributed by postgraduate research degree holders, and **£0.2bn** contributed by international students with other undergraduate qualifications obtained in the UK.
- By domicile, EU domiciled graduates in the cohort were expected to generate **£1.2bn** for the UK Exchequer (**£113,000** on average per graduate), with non-EU domiciled graduates generating **£2.1bn** (**£109,000** on average per graduate).

[81] All estimates have been converted to 2018/19 prices for consistency with the current analysis.

5 The public purse costs of hosting international students

5.1 Cost of teaching grants

As discussed above (see Section 3.2.4), the public purse provides teaching grants to higher education institutions located in each of the four home nations to compensate institutions for (part of) the costs of teaching provision to UK and EU domiciled students (note again that no such funding is applicable to non-EU domiciled students). For instance, higher education institutions in England receive approximately **£2,000** in teaching grant funding for every UK *or* EU domiciled student undertaking a full-time first degree (from the Office for Students) over the course of their studies (in net present values), while Scottish higher education institutions receive approximately **£10,000** per student from the Scottish Funding Council (reflecting the different HE funding approaches in these two home nations).

Table 16 presents the teaching grant costs associated with **EU domiciled students** (over their total study duration), per student and in aggregate.[82] Per student, this cost was estimated to be **£2,000** on average across all levels of study. Aggregating across the entire cohort of first-year international students commencing their studies in 2018/19, the cost to the public purse associated with the provision of teaching grants to UK HEIs associated with EU students was estimated to be **£0.1bn**.[83]

Table 16 Teaching grant costs associated with the 2018/19 cohort, by level of study and domicile

Level of study	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Other undergraduate	£1,000	-	**£0**	£0.0bn	-	**£0.0bn**
First degree	£3,000	-	**£1,000**	£0.1bn	-	**£0.1bn**
Postgraduate (taught)	£1,000	-	**£0**	£0.0bn	-	**£0.0bn**
Postgraduate (research)	-	-	**-**	-	-	**-**
Average	**£2,000**	**-**	**£0**			
Total				**£0.1bn**	**-**	**£0.1bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.
'-' indicates values that are exactly equal to zero; '£0' indicates values that are *close* to zero in rounded terms.
Source: London Economics' analysis

[82] Note again that there is no teaching grant funding associated with non-EU domiciled students, or students undertaking postgraduate research qualifications (see Section 3.2.4).
[83] In addition to level and domicile, a more detailed breakdown of these estimates by study mode is provided in Annex A2.3.

5.2 Cost of student support

As with teaching grants, there are fundamental differences in the availability of public student support depending on students' domicile. While EU undergraduate students are (currently) eligible to receive tuition fee loans and/or grants for the full fee associated with the higher education qualification that they undertake, non-EU students receive no public financial support in this respect.[84] In addition, the fee support available to EU domiciled students depends on the location of study; e.g. while EU undergraduate students attending higher education institutions in England, Wales and Northern Ireland are eligible for tuition fee loans, EU students in Scotland can receive a tuition fee grant to cover the full cost of their fees.

The economic cost associated with student support (in the form of loan write-offs and interest rate subsidies with respect to tuition fee loans and/or the provision of tuition fee grants) over the total study duration for a typical **EU domiciled** student was estimated to be **£4,000**. As before, there is some degree of variation depending on the qualification undertaken. While there is more limited student support available to postgraduate students in the 2018/19 cohort[85] (approximately **£2,000** per student undertaking a postgraduate research degree), the student support costs associated with first degree level tuition fee support for EU students was estimated to be approximately **£8,000** per student.

In aggregate, the total cost of student support associated with the 2018/19 cohort of international students was estimated at **£0.3bn**.

[84] Note that, in relation to maintenance loans and grants, although both were available to UK domiciled students in 2018/19 (depending on the home nation domicile), maintenance support was only available to EU nationals provided a three year residency requirement in the UK had been fulfilled; however, in these circumstances, these students were classified as UK domiciled students for the purposes of receipt of student support (which is the practice adopted by the Higher Education Statistics Agency). Hence, there is no cost to the public purse in respect of maintenance support for EU students.

[85] This relates to student support after adjusting for the RAB charge associated with tuition fee loans. As outlined in Section 3.2.5, we assume relatively low or zero RAB charges associated with the tuition fee loans available to postgraduate students; as a result, the estimated student support costs associated with postgraduate students is relatively low as compared to undergraduate students.

Table 17 Student support costs associated with the 2018/19 cohort, by domicile and level of study

Level of study	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Other undergraduate	£2,000	-	**£0**	£0.0bn	-	**£0.0bn**
First degree	£8,000	-	**£3,000**	£0.3bn	-	**£0.3bn**
Postgraduate (taught)	£0	-	**£0**	£0.0bn	-	**£0.0bn**
Postgraduate (research)	£2,000	-	**£0**	£0.0bn	-	**£0.0bn**
Average	**£4,000**	**-**	**£1,000**			
Total				**£0.3bn**	**-**	**£0.3bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.
'-' indicates values that are exactly equal to zero; '£0' indicates values that are *close* to zero in rounded terms.
Source: London Economics' analysis

5.3 Other public costs

As discussed above (Section 3.2.6), our estimates of the public costs associated with 'other' public services (not directly related to HE attendance) have been adjusted for the specific eligibility of international students and their dependants for these services. This was undertaken separately by student domicile, type of dependant (i.e. adult or child), level of study and mode of study. The analysis was also undertaken at regional level to reflect the different costs of public service provision in each of the regions and nations of the United Kingdom (where this information is available). After calculating the resulting costs per head (i.e. per student *and* dependant), to estimate an average cost *per student*, we then adjusted the analysis to reflect differences in EU and non-EU students' probability of bringing their dependants to the UK (and hence drawing on public resources while staying in the United Kingdom).

On average, the wider public costs associated with **EU domiciled students** in the 2018/19 cohort were estimated at **£16,000** per student in net present value terms over the course of their studies (see Table 18). The corresponding cost associated with **non-EU domiciled students** was estimated at approximately **£7,000**. The higher costs per EU student are primarily driven by their higher likelihood of bringing dependants to the UK with them, and the associated additional public cost of providing these 'other' public services to their dependants. In addition, EU students are eligible to benefit from a larger range of such 'other' public services than non-EU students (such as social security).

Table 18 Other public costs associated with the 2018/19 cohort, by level of study and domicile

Level of study	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Other undergraduate	£25,000	£7,000	**£11,000**	£0.1bn	£0.1bn	**£0.2bn**
First degree	£18,000	£10,000	**£13,000**	£0.6bn	£0.7bn	**£1.3bn**
Postgraduate (taught)	£10,000	£5,000	**£5,000**	£0.2bn	£0.5bn	**£0.8bn**
Postgraduate (research)	£20,000	£11,000	**£14,000**	£0.1bn	£0.1bn	**£0.2bn**
Average	**£16,000**	**£7,000**	**£9,000**			
Total				**£1.0bn**	**£1.4bn**	**£2.4bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.
Source: London Economics' analysis

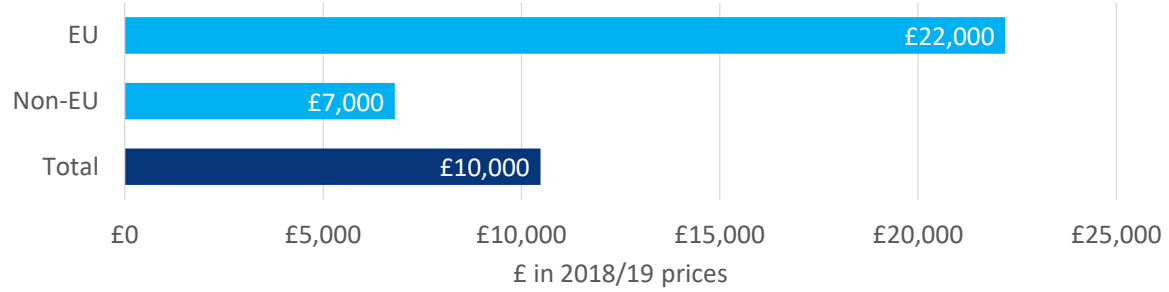
As in the analysis of the benefits associated with international students, these costs are positively related to the duration of study. In this respect, note that there are some qualifications – particularly 'other' undergraduate qualifications – that are associated with particularly high Exchequer costs for EU students. This is again driven by the particular composition of the student cohort, where there is a relatively high incidence of these qualifications being undertaken on a part-time basis (hence extending the duration of possible support that students and their dependants receive).

Aggregating across the 2018/19 cohort of first-year students, the total 'other' public cost associated with these international students and their dependants was estimated to be **£2.4bn**. Of this total, approximately **£1.0bn** is associated with supporting EU domiciled students and their dependants, with the remaining **£1.4bn** associated with supporting non-EU students and their dependants.

5.4 Total costs

Combining the costs associated with the teaching grants paid to UK higher education institutions (for EU students), student support in the form of tuition fee loans and grants (again for EU students only), as well as the costs of providing 'other' public services to international students and their dependants, the total cost to the Exchequer associated with a typical EU domiciled student (over the duration of their studies) was estimated at **£22,000**, while the comparable figure for non-EU students was estimated at **£7,000** (Figure 17). For EU students (incorporating any dependants), the total cost of **£22,000** includes **£2,000** in teaching grants, **£4,000** in student support costs, and **£16,000** in costs associated with wider public service provision. For the typical non-EU domiciled student, the total cost of **£7,000** is made up entirely of the costs associated with wider public service provision.

Figure 17 Total cost per student associated with the 2018/19 cohort, by domicile



Note: Values per student are rounded to the nearest £1,000. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

Aggregating across the 2018/2019 cohort of first-year students, the total cost of international students to the UK economy was estimated at **£2.9bn**, split roughly equally between EU (**£1.4bn**) and non-EU (**£1.4bn**) domiciled students (Table 19).

Table 19 Total costs associated with the 2018/19 cohort, by domicile and type of cost

Type of cost	EU	Non-EU	Total
Teaching grants	£0.1bn	-	**£0.1bn**
Student support	£0.3bn	-	**£0.3bn**
Other public costs	£1.0bn	£1.4bn	**£2.4bn**
Total	**£1.4bn**	**£1.4bn**	**£2.9bn**

Note: Values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum due to rounding.
Source: London Economics' analysis

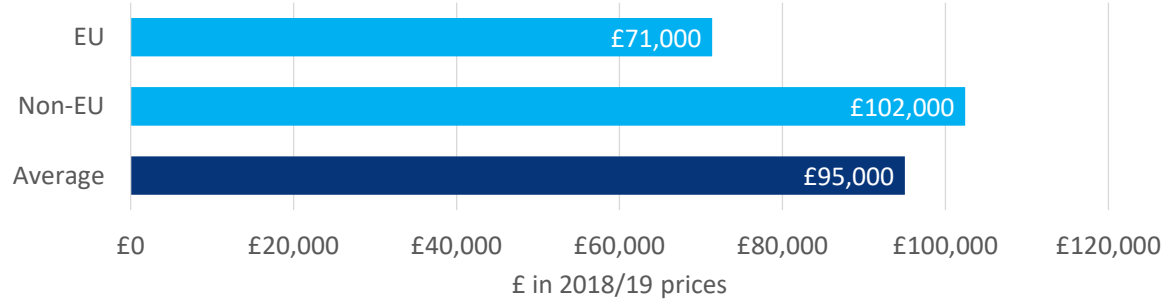
6 The net economic impact associated with international students

6.1 Total across the UK economy

Combining the total costs and benefits presented in Sections 4 and 5, the estimated **net economic impact** per student was estimated to be **£71,000** per 'typical' EU domiciled student in the 2018/19 cohort, and **£102,000** per non-EU domiciled student (see Figure 18). In other words, **every 14 EU students and every 10 non-EU students generate £1m worth of net economic impact for the UK economy** over the duration of their studies.

Expressed in terms of **benefit to cost ratios**, dividing the economic benefit associated with EU domiciled and non-EU domiciled students (estimated to be **£94,000** and **£109,000** respectively) by the corresponding public costs (estimated to be **£22,000** and **£7,000** respectively), the analysis suggests that there is a benefit to cost ratio of approximately **4.2** and **16.1** associated with hosting EU and non-EU students at UK higher education institutions, respectively (and **10.1** on average across both domiciles).[86]

Figure 18 Net impact per student associated with the 2018/19 cohort, by domicile

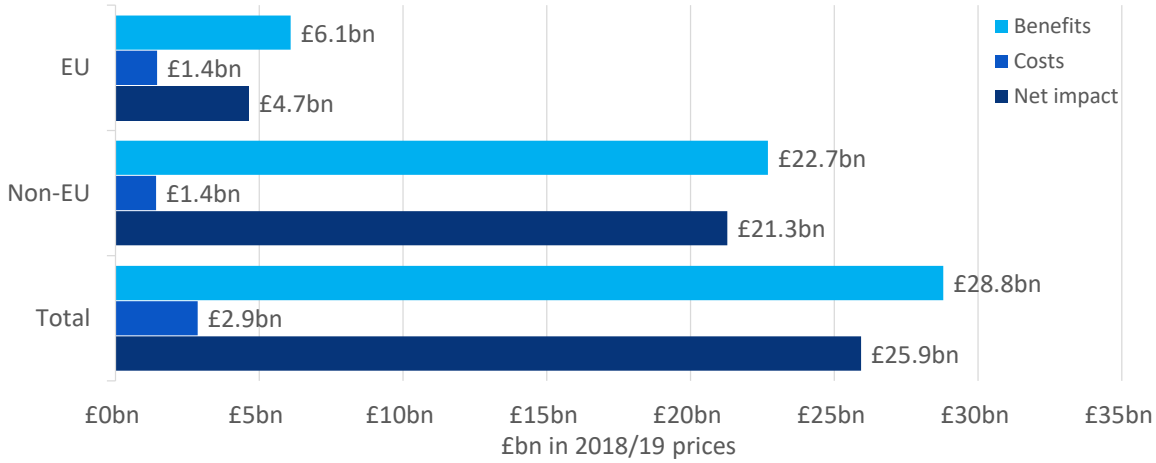


Note: Values per student are rounded to the nearest £1,000. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

Aggregating across the total cohort of first-year international students enrolled with UK HEIs in the 2018/19 academic year, **the total net impact of international students on the UK economy was estimated to be £25.9bn**, with **£4.7bn** of net impact generated by EU domiciled students, and **£21.3bn** of net impact generated by non-EU domiciled students in the cohort (see Figure 19).

[86] The average is weighted by the number students in the 2018/19 cohort by domicile. A more detailed breakdown of these estimates by study level is provided in Annex A2.4.

Figure 19 Net impact associated with the 2018/19 cohort, by domicile



Note: Values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

6.2 Sensitivity of results to alternative scenarios

6.2.1 Impact of Brexit

In previous research for the Department for Education (2021) assessing the impact of Brexit on international demand for higher education, the removal of student support available to EU-domiciled students and the decoupling of fees (such that EU-domiciled students would be charged tuition fees equivalent to those levied on non-EU domiciled students) was estimated to result in a **57%** reduction in EU-domiciled students undertaking higher education qualifications at UK higher education providers (equivalent to approximately **37,000** students). Assuming that this reduction in student numbers applied equally across the current distribution of students by qualification level, the total negative effect associated with Brexit on the UK economy per cohort of students was estimated to be approximately **£1.2 billion** (corresponding to **£24.7 billion** in total). Despite the additional economic benefit associated with the increase in tuition fee income from those students that might continue to come to the UK (**£3.5 billion**), this is outweighed by the economic losses associated with the reduction in tuition fee and non-tuition fee expenditures linked to those students no longer expected to study in the UK (**£4.6 billion**).

6.2.2 UK International Education Strategy

In March 2019, the UK government announced its ambitions to increase the number of international students undertaking higher education in the United

Kingdom to 600,000[87]. This represents a 21% increase on the **496,000** international students undertaking higher education in the UK in 2018/19.

Assuming that there was a **21%** increase in the number of new international students commencing their studies in the United Kingdom (and assuming that there was no change in the composition of the cohort of new starters), this would imply approximately **330,000** new starters (compared to **272,920** considered in the main analysis presented here). Assuming that all existing students plus any additional students are treated as non-EU domiciled students, the total additional economic impact to the UK economy if this ambition were realised is estimated to be **£9.5 billion** (corresponding to **£35.5 billion** in total).

6.3 Change over time

In Figure 20, we present a comparison of the net economic contribution associated with the 2015/16 and 2018/19 cohorts of international students. Reflecting the **17%** increase in the number of international students between the two cohorts of starters (predominantly driven by non-EU domiciled students)[88], the net economic impact has increased from **£21.7bn** for the 2015/16 cohort to **£25.9bn** associated with the 2018/19 cohort (a **19%** increase in real terms).[89]

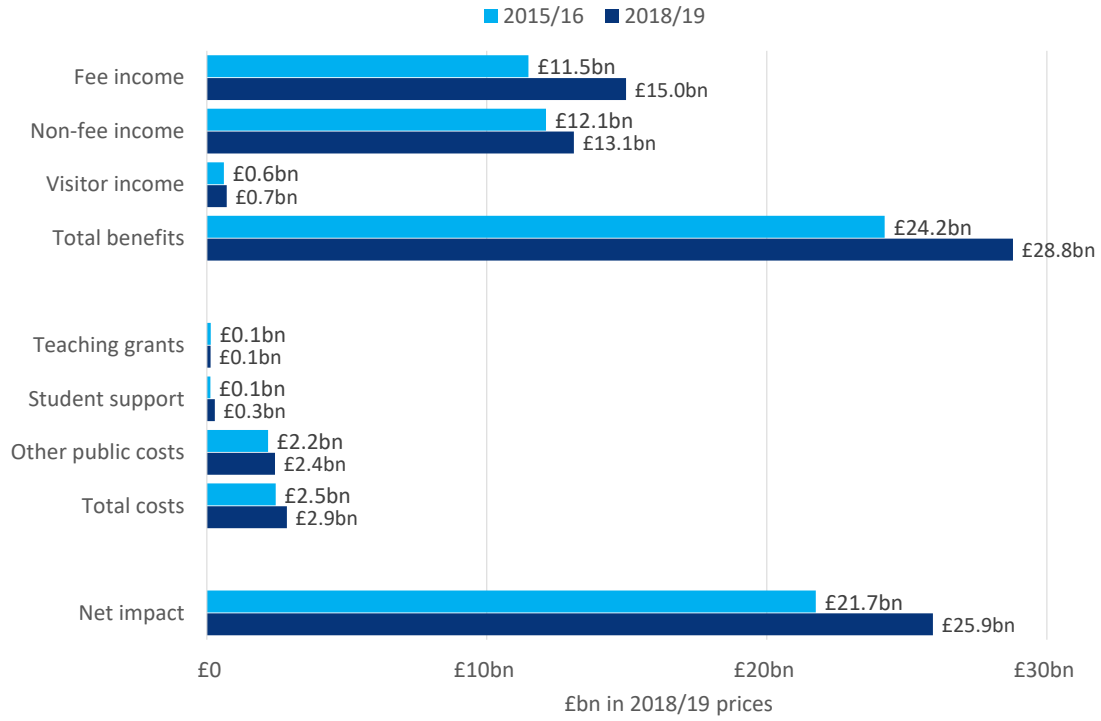
The **economic benefits** have risen from **£24.2bn** to **£28.8bn** (**19%**), driven by an increase in tuition fee income from international students (predominantly due to higher fees charged to non-EU students and EU postgraduate students, and the increase in the size of the cohort).

The **public costs** of hosting international students have also increased, but to a smaller extent (from **£2.5bn** to **£2.9bn** (**16%**)). These increased costs are driven by an increase in:

- The costs of **student support** provided to EU domiciled students (due to an increase in the RAB charge associated with fee loans for students in England, and the increase in the size of the cohort); and
- The **costs of providing 'other' public services** to international students and their dependants (again due to the larger cohort size).

[87] HM Government (2019).
[88] See Section 2.1 for more information.
[89] The previous results for 2015/16 have been converted to 2018/19 prices, to allow for a comparison in real terms.

Figure 20 Net impact associated with the 2015/16 and 2018/19 cohorts



Note: Values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

6.4 Impact by region

In Figure 21, we present the net economic impact of the 2018/19 cohort of international students on the UK economy **by region** of institution that they attend. Clearly, the distribution of net economic impact by region of institution is closely linked to the number of students in the cohort attending institutions in each region.

Again, it is important to note that, rather than measuring the economic impact of international students *on each region separately* (although there will clearly be a significant local and regional impact associated with international students' non-tuition fee expenditure in particular), the analysis instead estimates the impact *on the UK as a whole*, but subsequently splits this out by the location of the international students (in terms of the location of the HEIs they are enrolled with).[90]

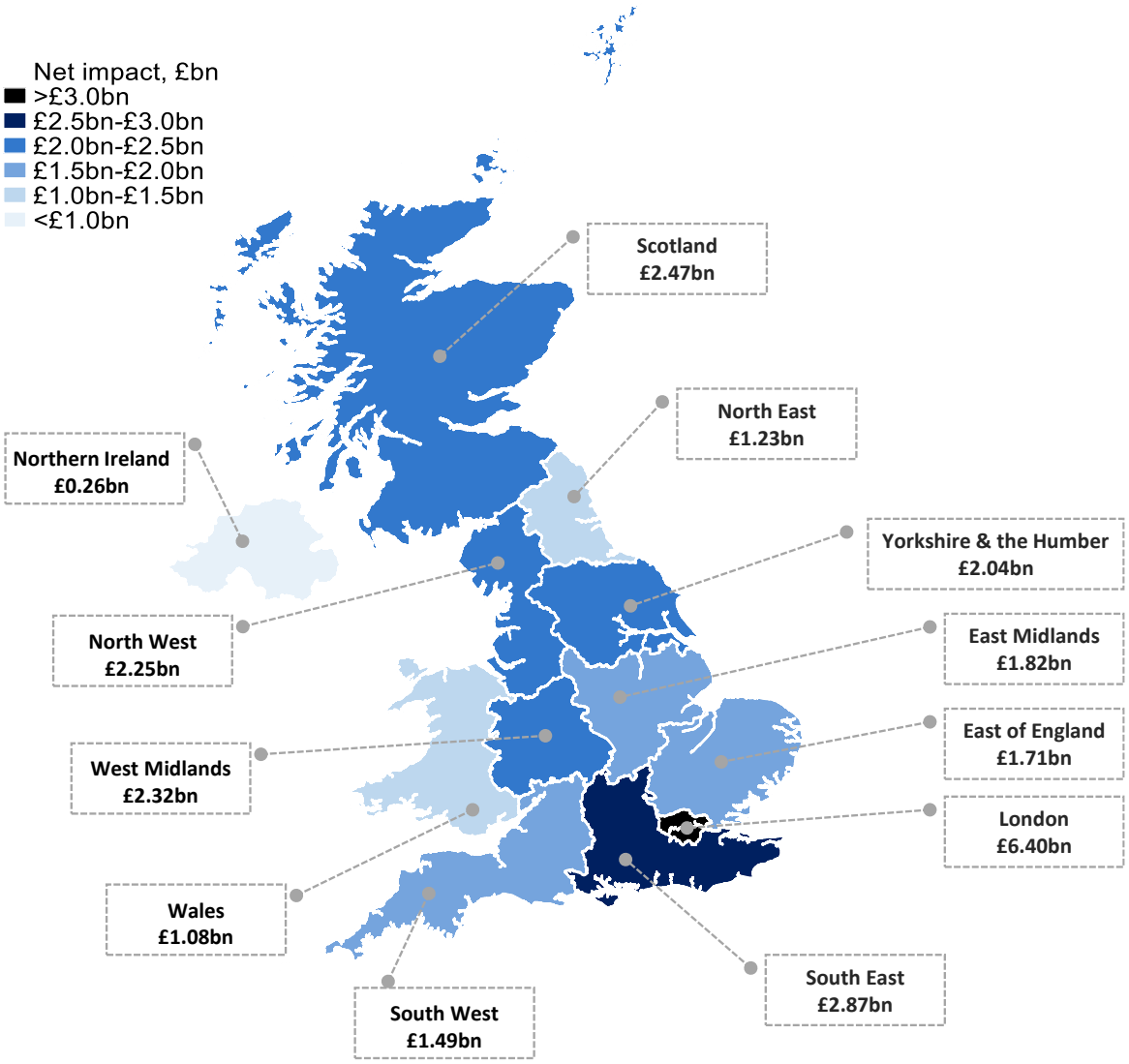
[90] This is based on differences in the size of the economic multipliers (see Section 3.2.2 for more information), which increase as the geographical region of analysis is widened: the larger the geographical area under consideration, the larger the available labour force and number of input suppliers that institutions, students, and visitors source their demand from (implying a larger economic impact). As a result, regional economic multipliers are smaller than the corresponding multipliers for the UK as a whole – and the resulting sum of regional impacts across all regions would *not* equate to the total UK impact. To

Considering the resulting distribution of impact by region, the analysis indicates that international students have an impact across the entire United Kingdom, varying from a **£0.26bn** net economic contribution from international students in Northern Ireland to **£6.40bn** generated by international students studying in London. The net impact generated by international students based in the South East was estimated to be **£2.87bn**, compared to **£2.32bn** in the West Midlands, **£2.25bn** in the North West, **£2.04bn** in Yorkshire and the Humber, **£1.83bn** in the East Midlands, **£1.71bn** in the East of England**, £1.49bn** in the South West, and **£1.23bn** in the North East.

In relation to the other home nations of the United Kingdom, the contribution of international students in Scotland to the UK economy was estimated to be **£2.47bn**, compared to a contribution of **£1.08bn** from international students based in Wales.

avoid these issues, we instead estimated impacts on the UK as a whole, and subsequently split these out by region (based on the location of universities which international students are enrolled with).

Figure 21 Net impact associated with the 2018/19 cohort, by location (region) of higher education institution

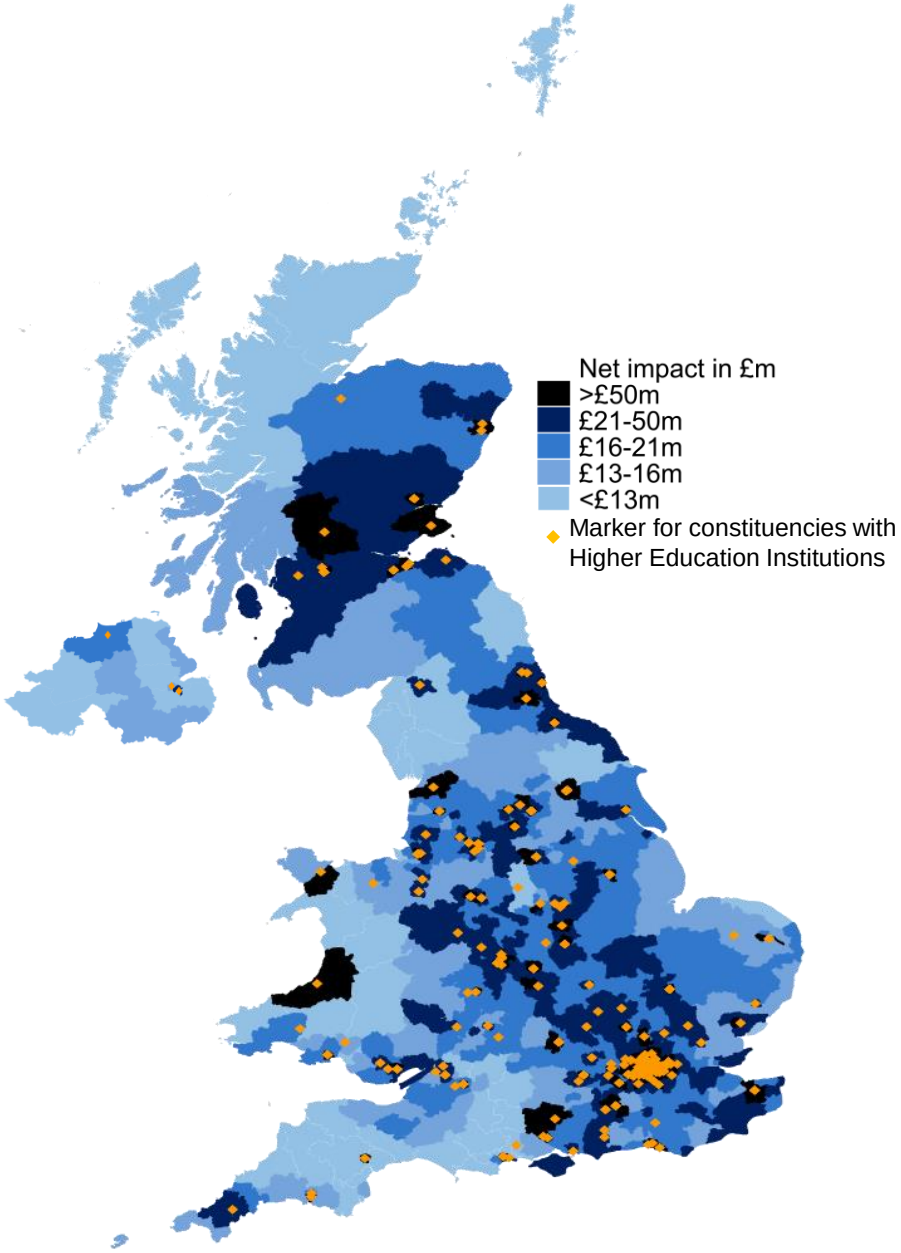


Note: Values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***. ***Contains National Statistics data, OS data, Royal Mail, Gridlink, LPS (Northern Ireland), ONS, NISRA data, NRS data and Ordnance Survey data © Crown copyright and database right 2021.***

6.5 Impact by parliamentary constituency

To analyse the impact of international students on the UK economy at a more granular level, we further split the above net impacts by **parliamentary constituency** (Figure 22).

Figure 22 Net impact associated with the 2018/19 cohort, by parliamentary constituency



Note: All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis. Contains National Statistics data, OS data, Royal Mail, Gridlink, LPS (Northern Ireland), ONS, NISRA data, NRS data and Ordnance Survey data © Crown copyright and database right 2021.***

As discussed in Section 3.2.3, note that, given that there is no official information on the specific residency location of international students while studying, we have assumed that the residency distribution of international students is the same as that for all students 'usually resident' in the UK (i.e. including both UK and non-UK

domiciled students[91]). Therefore, we estimated the contribution of international students to the UK economy – by region of higher education institution – and applied the same geographic distribution of *all* students' residency (from the Census) to *international* students. The analysis illustrates that the contribution of international students to the UK economy is clustered around the location of higher education institutions – but also demonstrates the economic contribution made by international students across the entire United Kingdom.

6.5.1 Average impact per parliamentary constituency by region

Table 20 summarises the average impact per parliamentary constituency, by UK region. On average across all regions, international students make a **£40m net economic contribution to the UK economy per parliamentary constituency**, which is equivalent to **£390** per member of the resident population (after all costs have been accounted for).

[91] For a more detailed discussion of the limitations associated with the Census data, please refer to Section 3.2.3.

Table 20 Average impact associated with the 2018/19 cohort per parliamentary constituency, by region

Region	# of 1st year students	Benefits	Costs	Net impact	Net impact per resident
East of England	300	£33m	£3m	**£29m**	**£290**
East Midlands	390	£43m	£3m	**£40m**	**£390**
London	965	£98m	£11m	**£88m**	**£760**
North East	435	£46m	£4m	**£42m**	**£460**
North West	280	£33m	£3m	**£30m**	**£300**
South East	345	£38m	£4m	**£34m**	**£330**
South West	265	£30m	£3m	**£27m**	**£270**
West Midlands	400	£43m	£4m	**£39m**	**£400**
Yorkshire & the Humber	390	£41m	£3m	**£38m**	**£370**
Wales	310	£31m	£4m	**£27m**	**£340**
Scotland	505	£49m	£7m	**£42m**	**£460**
Northern Ireland	190	£18m	£3m	**£14m**	**£140**
Average	**420**	**£44m**	**£4m**	**£40m**	**£390**

Note: Numbers of students are rounded to the nearest 5; total estimates are rounded to the nearest £1 million; and estimates per resident are rounded to the nearest £10. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Estimates of the total resident population are derived from the 2011 Census (see Office for National Statistics, 2011b). ***Source: London Economics' analysis***

The average impact was highest for parliamentary constituencies in **London** (with an average net impact of **£88 million** per constituency, equivalent to **£760** per resident). The average impact per parliamentary constituency in the **North East** and **Scotland** was estimated at **£460** per member of the resident population; between **£370** and **£400** per member of the resident population in the **East and West Midlands** and **Yorkshire and the Humber**; and between **£270** and **£340** per member of the resident population in the **North West**, **South East**, **South West**, **the East of England**, and **Wales**.

6.5.2 Impact by parliamentary constituency

The above consideration of average impacts per constituency by region does not reflect the particular concentration of international students within regions.

Table 21 summarises the results for the 20 parliamentary constituencies with the **highest** net impact on the UK economy resulting from international students in the 2018/19 cohort. Reflecting the estimated number of international first-year students resident in **Sheffield Central** (**2,980**), the analysis indicates that the contribution to the UK economy of the international students in the 2018/19

cohort resident in Sheffield Central stands at approximately **£290m**, which is equivalent to **£2,520** per member of the overall resident population (see Table 4). The other constituencies where international students make the greatest contribution to the UK economy are **Nottingham South** (**£261m** (**£2,390**)), **Holborn and St Pancras** (**£243m** (**£1,790**)), **Newcastle upon Tyne East** (**£240m** (**£2,510**)), **East Ham** (**£217m** (**£1,450**)) and **Cambridge** (**£214m** (**£1,860**)).

Note that there are constituencies from across almost all UK regions represented on the top-20 list, with international students in **Manchester Central** (North West) contributing **£211m** (**£1,570**); **Oxford East** (South East) contributing **£211m** (**£1,740**); **Birmingham Ladywood** (West Midlands) contributing **£183m** (**£1,450**); **Cardiff Central** (Wales) contributing **£181m** (**£2,050**); **Bristol West** (South West) contributing **£175m** (**£1,400**); and **Glasgow Central** (Scotland) contributing **£171m** (**£1,880**).

In Table 22, we present the 20 constituencies where international students have the relatively lowest net economic impact on the UK economy, while in Figure 23, we present a detailed mapping of net economic impact by parliamentary constituency – separately for each of the 12 UK regions. Detailed information on the total contribution of international students in *every* parliamentary constituency is presented in Table 32 in Annex A2.5.

Table 21 Total costs, benefits, and impact of international students in the top 20 parliamentary constituencies in terms of net impact

Rank	Parliamentary Constituency	Region	# of first-year students			Benefits	Costs	Net impact	Net impact per resident
			EU	Non-EU	Total				
1	Sheffield Central	Yorkshire and the Humber	395	2,585	2,980	£313m	£23m	£290m	£2,520
2	Nottingham South	East Midlands	405	2,170	2,575	£283m	£22m	£261m	£2,390
3	Holborn and St Pancras	London	705	1,965	2,670	£272m	£29m	£243m	£1,790
4	Newcastle upon Tyne East	North East	440	2,015	2,455	£263m	£22m	£240m	£2,510
5	East Ham	London	630	1,755	2,385	£243m	£26m	£217m	£1,450
6	Cambridge	East of England	700	1,480	2,180	£238m	£24m	£214m	£1,860
7	West Ham	London	615	1,715	2,330	£237m	£25m	£212m	£1,340
8	Manchester Central	North West	350	1,600	1,950	£230m	£19m	£211m	£1,570
9	Oxford East	South East	580	1,555	2,135	£233m	£22m	£211m	£1,740
10	Liverpool, Riverside	North West	340	1,545	1,885	£222m	£18m	£203m	£1,770
11	Leeds Central	Yorkshire and the Humber	270	1,760	2,030	£213m	£16m	£198m	£1,490
12	Bermondsey and Old Southwark	London	535	1,485	2,020	£206m	£22m	£184m	£1,450
13	Birmingham, Ladywood	West Midlands	400	1,460	1,860	£201m	£17m	£183m	£1,450
14	Leicester South	East Midlands	285	1,510	1,795	£197m	£15m	£182m	£1,530
15	Cardiff Central	Wales	510	1,560	2,070	£206m	£25m	£181m	£2,050
16	Bethnal Green and Bow	London	510	1,425	1,935	£197m	£21m	£176m	£1,410
17	Bristol West	South West	370	1,350	1,720	£191m	£16m	£175m	£1,400
18	Glasgow Central	Scotland	620	1,445	2,065	£199m	£28m	£171m	£1,880
19	Coventry South	West Midlands	370	1,345	1,715	£185m	£16m	£169m	£1,600
20	Portsmouth South	South East	445	1,190	1,635	£178m	£17m	£161m	£1,500
Average (all constituencies)			**100**	**320**	**420**	**£44m**	**£4m**	**£40m**	**£390**

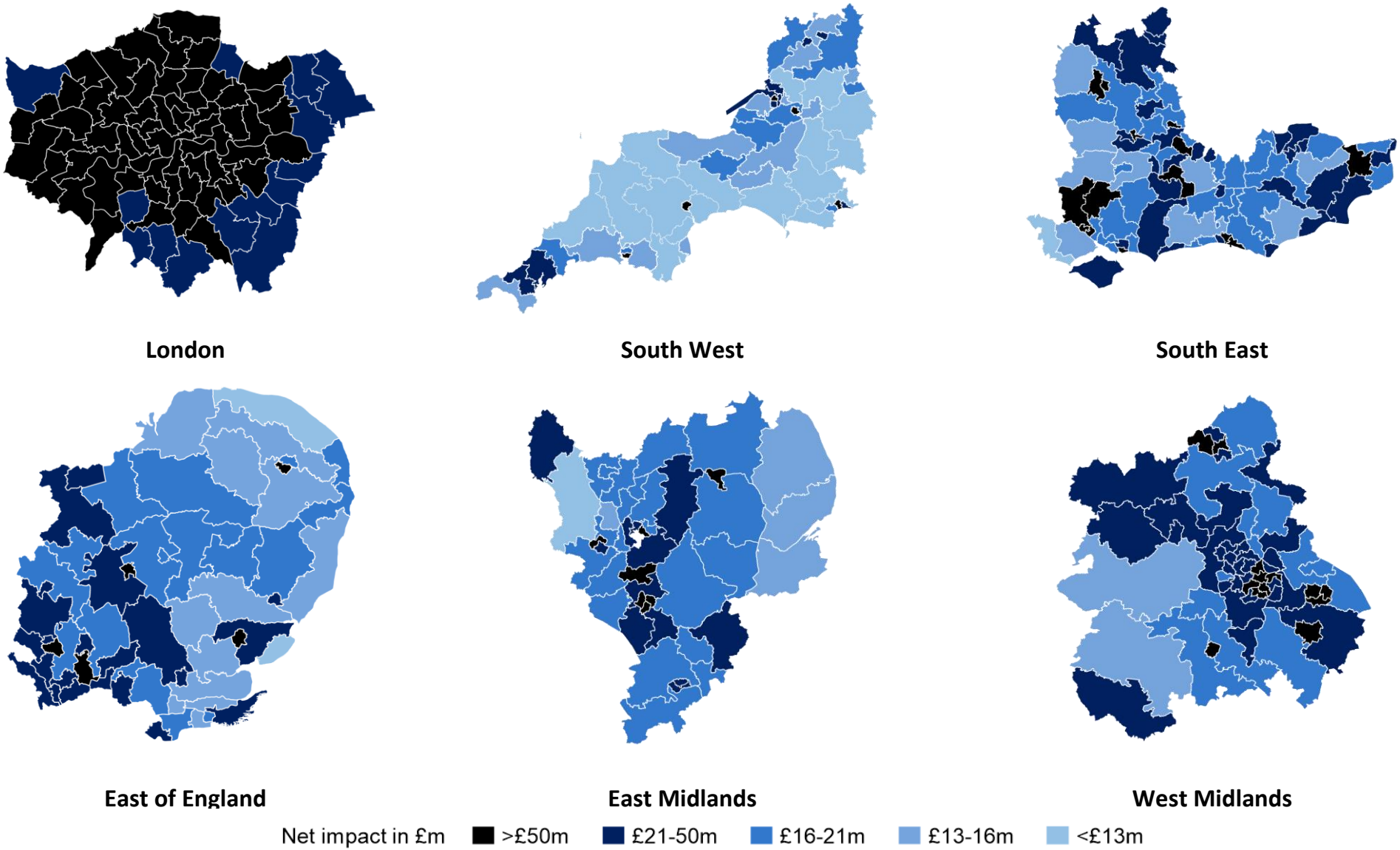
Note: Numbers of students are rounded to the nearest 5; total estimates are rounded to the nearest £1 million; and estimates per resident are rounded to the nearest £10. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

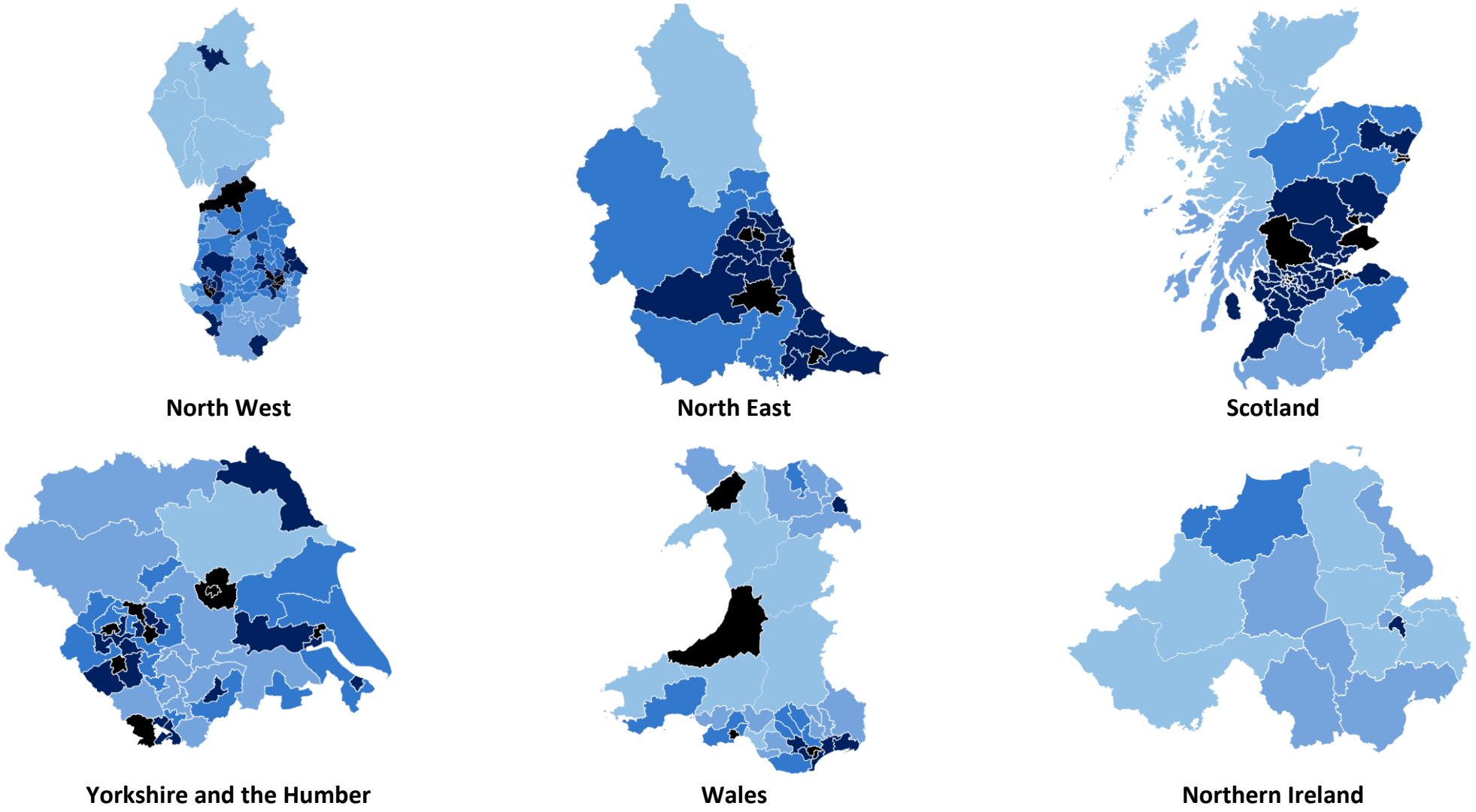
Table 22 Total costs, benefits, and impact of international students in the bottom 20 parliamentary constituencies in terms of net impact

Rank	Parliamentary Constituency	Region	# of first-year students			Benefits	Costs	Net impact	Net impact per resident
			EU	Non-EU	Total				
631	West Tyrone	Northern Ireland	55	90	145	£13m	£3m	£11m	£120
632	Lagan Valley	Northern Ireland	55	90	145	£12m	£1m	£11m	£120
633	Barrow and Furness	North West	20	80	100	£12m	£1m	£11m	£130
634	Westmorland and Lonsdale	North West	20	80	100	£13m	£3m	£11m	£110
635	Central Devon	South West	25	85	110	£12m	£1m	£11m	£120
636	South Antrim	Northern Ireland	55	90	145	£13m	£2m	£11m	£110
637	Tiverton and Honiton	South West	20	80	100	£12m	£1m	£11m	£110
638	North Norfolk	East of England	35	70	105	£11m	£1m	£10m	£120
639	Brecon and Radnorshire	Wales	30	85	115	£11m	£1m	£10m	£140
640	Belfast East	Northern Ireland	50	85	135	£12m	£2m	£10m	£110
641	Dwyfor Meirionnydd	Wales	25	85	110	£11m	£1m	£10m	£160
642	Strangford	Northern Ireland	45	75	120	£11m	£2m	£9m	£100
643	North Down	Northern Ireland	45	75	120	£11m	£2m	£9m	£100
644	Workington	North West	15	65	80	£10m	£1m	£9m	£110
645	Ross, Skye and Lochaber	Scotland	30	75	105	£10m	£1m	£9m	£130
646	Montgomeryshire	Wales	25	75	100	£10m	£1m	£9m	£140
647	Caithness, Sutherland and Easter Ross	Scotland	30	75	105	£10m	£1m	£9m	£140
648	Copeland	North West	15	65	80	£9m	£1m	£8m	£100
649	Orkney and Shetland	Scotland	20	45	65	£6m	£1m	£5m	£120
650	Na h-Eileanan An Iar	Scotland	15	40	55	£5m	£1m	£5m	£160
Average (all constituencies)			**100**	**320**	**420**	**£44m**	**£4m**	**£40m**	**£390**

Note: Numbers of students are rounded to the nearest 5; total estimates are rounded to the nearest £1 million; and estimates per resident are rounded to the nearest £10. All estimates are presented in 2018/19 prices and discounted to reflect net present values. ***Source: London Economics' analysis***

Figure 23 Total net impact on the UK by parliamentary constituency – separately for each region





Note: The Orkney Islands and Shetland Islands are not presented for ease of visibility. Both constituencies can be identified in Table 32 in Annex A2.5. ***Source: London Economics' analysis. Contains National Statistics data, OS data, Royal Mail, Gridlink, LPS (Northern Ireland), ONS, NISRA data, NRS data and Ordnance Survey data © Crown copyright and database right 2021.***

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Annex 2 Supplementary findings

A2.1 Other public costs for students and dependants

Table 23 and Table 24 provide a detailed overview of the estimated 'other' public costs per student or adult dependant (Table 23) and child dependant (Table 24) per year - by type of public service, region (where available/applicable), student domicile (i.e. EU and non-EU), and study mode.

Table 23 'Other' public costs per student or adult dependant per year, by type of service, region, student domicile, and study mode

Region ->	EAST		EMID		LOND		NEAS		NWES		SEAS		SWES		WMID		YORH		WALE		SCOT		NIRE	
Domicile ->	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**
Full-time students																								
Health[1]	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180
Education[2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Social security	£413	-	£413	-	£413	-	£413	-	£413	-	£413	-	£413	-	£413	-	£413	-	£445	-	£445	-	£445	-
Housing	£129	£129	£108	£108	£272	£272	£159	£159	£103	£103	£133	£133	£102	£102	£123	£123	£164	£164	£260	£260	£409	£409	£411	£411
General public services	£107	£107	£76	£76	£77	£77	£95	£95	£81	£81	£117	£117	£92	£92	£98	£98	£71	£71	£171	£171	£235	£235	£209	£209
Defence	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£0	£0	£1	£1	£1	£1	-	-
Public order[3]	£373	£373	£399	£399	£693	£693	£489	£489	£451	£451	£359	£359	£360	£360	£405	£405	£441	£441	£453	£453	£521	£521	£662	£662
Economic affairs	£830	£830	£618	£618	£1,280	£1,280	£840	£840	£724	£724	£861	£861	£708	£708	£763	£763	£624	£624	£892	£892	£1,269	£1,269	£959	£959
Environment	£150	£150	£106	£106	£124	£124	£113	£113	£362	£362	£119	£119	£156	£156	£99	£99	£115	£115	£198	£198	£231	£231	£135	£135
Recreation[4]	£83	£83	£86	£86	£126	£126	£95	£95	£101	£101	£86	£86	£87	£87	£87	£87	£99	£99	£165	£165	£187	£187	£281	£281
Non-identifiable & O/S[1]	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041
Total	**£4,607**	**£3,894**	**£4,328**	**£3,615**	**£5,507**	**£4,794**	**£4,726**	**£4,013**	**£4,757**	**£4,044**	**£4,610**	**£3,897**	**£4,440**	**£3,727**	**£4,510**	**£3,797**	**£4,448**	**£3,735**	**£5,106**	**£4,361**	**£5,819**	**£5,074**	**£5,623**	**£4,878**
Part-time students																								
Health[1]	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180
Education[2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Social security	£1,444	-	£1,444	-	£1,444	-	£1,444	-	£1,444	-	£1,444	-	£1,444	-	£1,444	-	£1,444	-	£2,116	-	£2,116	-	£2,116	-
Housing	£129	£129	£108	£108	£272	£272	£159	£159	£103	£103	£133	£133	£102	£102	£123	£123	£164	£164	£260	£260	£409	£409	£411	£411
General public services	£107	£107	£76	£76	£77	£77	£95	£95	£81	£81	£117	£117	£92	£92	£98	£98	£71	£71	£171	£171	£235	£235	£209	£209
Defence	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£0	£0	£1	£1	£1	£1	-	-
Public order[3]	£373	£373	£399	£399	£693	£693	£489	£489	£451	£451	£359	£359	£360	£360	£405	£405	£441	£441	£453	£453	£521	£521	£662	£662
Economic affairs	£830	£830	£618	£618	£1,280	£1,280	£840	£840	£724	£724	£861	£861	£708	£708	£763	£763	£624	£624	£892	£892	£1,269	£1,269	£959	£959
Environment	£150	£150	£106	£106	£124	£124	£113	£113	£362	£362	£119	£119	£156	£156	£99	£99	£115	£115	£198	£198	£231	£231	£135	£135
Recreation[4]	£83	£83	£86	£86	£126	£126	£95	£95	£101	£101	£86	£86	£87	£87	£87	£87	£99	£99	£165	£165	£187	£187	£281	£281
Non-identifiable & O/S[1]	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041
Total	**£5,638**	**£3,894**	**£5,359**	**£3,615**	**£6,538**	**£4,794**	**£5,757**	**£4,013**	**£5,788**	**£4,044**	**£5,641**	**£3,897**	**£5,471**	**£3,727**	**£5,541**	**£3,797**	**£5,479**	**£3,735**	**£6,776**	**£4,361**	**£7,489**	**£5,074**	**£7,293**	**£4,878**

Note: All values constitute annual costs per head, presented in 2018/19 prices.

[1] Indicates costs which do not differ between regions (due to a lack of breakdown in the underlying data).

[2] The costs of pre-primary, primary and secondary education are applicable to child dependants only.

[3] Public order and safety.

[4] Recreation, culture, and religion.

Source: London Economics' analysis based on a range of sources (see Section 3.2.6 for more detail)

Table 24 'Other' public costs per child dependant per year, by type of service, region, student domicile, and study mode

Region ->	EAST		EMID		LOND		NEAS		NWES		SEAS		SWES		WMID		YORH		WALE		SCOT		NIRE	
Domicile ->	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**	**EU**	**Non-EU**
Full-time students																								
Health[1]	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180
Education[2]	£5,395	£5,395	£5,408	£5,408	£5,785	£5,785	£5,907	£5,907	£5,254	£5,254	£5,032	£5,032	£5,280	£5,280	£5,533	£5,533	£5,644	£5,644	£5,973	£5,973	£6,484	£6,484	£4,481	£4,481
Social security	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Housing	£129	£129	£108	£108	£272	£272	£159	£159	£103	£103	£133	£133	£102	£102	£123	£123	£164	£164	£260	£260	£409	£409	£411	£411
General public services	£107	£107	£76	£76	£77	£77	£95	£95	£81	£81	£117	£117	£92	£92	£98	£98	£71	£71	£171	£171	£235	£235	£209	£209
Defence	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£0	£0	£1	£1	£1	£1	-	-
Public order[3]	£373	£373	£399	£399	£693	£693	£489	£489	£451	£451	£359	£359	£360	£360	£405	£405	£441	£441	£453	£453	£521	£521	£662	£662
Economic affairs	£830	£830	£618	£618	£1,280	£1,280	£840	£840	£724	£724	£861	£861	£708	£708	£763	£763	£624	£624	£892	£892	£1,269	£1,269	£959	£959
Environment	£150	£150	£106	£106	£124	£124	£113	£113	£362	£362	£119	£119	£156	£156	£99	£99	£115	£115	£198	£198	£231	£231	£135	£135
Recreation[4]	£83	£83	£86	£86	£126	£126	£95	£95	£101	£101	£86	£86	£87	£87	£87	£87	£99	£99	£165	£165	£187	£187	£281	£281
Non-identifiable & O/S[1]	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041
Total	**£9,589**	**£9,289**	**£9,322**	**£9,022**	**£10,879**	**£10,579**	**£10,219**	**£9,919**	**£9,598**	**£9,298**	**£9,229**	**£8,929**	**£9,307**	**£9,007**	**£9,630**	**£9,330**	**£9,678**	**£9,378**	**£10,633**	**£10,333**	**£11,857**	**£11,557**	**£9,659**	**£9,359**
Part-time students																								
Health[1]	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180	£480	£180
Education[2]	£5,395	£5,395	£5,408	£5,408	£5,785	£5,785	£5,907	£5,907	£5,254	£5,254	£5,032	£5,032	£5,280	£5,280	£5,533	£5,533	£5,644	£5,644	£5,973	£5,973	£6,484	£6,484	£4,481	£4,481
Social security	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Housing	£129	£129	£108	£108	£272	£272	£159	£159	£103	£103	£133	£133	£102	£102	£123	£123	£164	£164	£260	£260	£409	£409	£411	£411
General public services	£107	£107	£76	£76	£77	£77	£95	£95	£81	£81	£117	£117	£92	£92	£98	£98	£71	£71	£171	£171	£235	£235	£209	£209
Defence	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£1	£0	£0	£1	£1	£1	£1	-	-
Public order[3]	£373	£373	£399	£399	£693	£693	£489	£489	£451	£451	£359	£359	£360	£360	£405	£405	£441	£441	£453	£453	£521	£521	£662	£662
Economic affairs	£830	£830	£618	£618	£1,280	£1,280	£840	£840	£724	£724	£861	£861	£708	£708	£763	£763	£624	£624	£892	£892	£1,269	£1,269	£959	£959
Environment	£150	£150	£106	£106	£124	£124	£113	£113	£362	£362	£119	£119	£156	£156	£99	£99	£115	£115	£198	£198	£231	£231	£135	£135
Recreation[4]	£83	£83	£86	£86	£126	£126	£95	£95	£101	£101	£86	£86	£87	£87	£87	£87	£99	£99	£165	£165	£187	£187	£281	£281
Non-identifiable & O/S[1]	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041	£2,041
Total	**£9,589**	**£9,289**	**£9,322**	**£9,022**	**£10,879**	**£10,579**	**£10,219**	**£9,919**	**£9,598**	**£9,298**	**£9,229**	**£8,929**	**£9,307**	**£9,007**	**£9,630**	**£9,330**	**£9,678**	**£9,378**	**£10,633**	**£10,333**	**£11,857**	**£11,557**	**£9,659**	**£9,359**

Note: All values constitute annual costs per head, presented in 2018/19 prices.

[1] Indicates costs which do not differ between regions (due to a lack of breakdown in the underlying data).

[2] The costs of pre-primary, primary and secondary education are applicable to child dependants only.

[3] Public order and safety.

[4] Recreation, culture, and religion.

Source: London Economics' analysis based on a range of sources (see Section 3.2.6 for more detail).

A2.2 Benefits by mode

The following tables present the impact of the fee, non-fee, and visitor income on the UK economy associated with international students in the 2018/19 cohort (over their total study duration), per student and in aggregate, separately by domicile (EU versus non-EU), mode, and level of study.

Table 25 Impact of tuition fee income associated with the 2018/19 cohort, by level of study, domicile, and mode

Level and mode	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Full-time students						
Other undergraduate	£17,000	£36,000	**£33,000**	£0.0bn	£0.2bn	**£0.2bn**
First degree	£54,000	£105,000	**£87,000**	£1.8bn	£6.7bn	**£8.5bn**
Postgraduate (taught)	£17,000	£37,000	**£34,000**	£0.3bn	£4.2bn	**£4.6bn**
Postgraduate (research)	£44,000	£92,000	**£79,000**	£0.2bn	£1.0bn	**£1.2bn**
Average	**£40,000**	**£62,000**	**£57,000**			
Total				**£2.3bn**	**£12.1bn**	**£14.5bn**
Part-time students						
Other undergraduate	£14,000	£32,000	**£27,000**	£0.0bn	£0.2bn	**£0.2bn**
First degree	£25,000	£58,000	**£41,000**	£0.0bn	£0.0bn	**£0.0bn**
Postgraduate (taught)	£15,000	£32,000	**£24,000**	£0.1bn	£0.1bn	**£0.2bn**
Postgraduate (research)	£24,000	£56,000	**£42,000**	£0.0bn	£0.0bn	**£0.0bn**
Average	**£16,000**	**£33,000**	**£27,000**			
Total				**£0.1bn**	**£0.4bn**	**£0.5bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum because of rounding. ***Source: London Economics' analysis***

Table 26 Impact of non-tuition fee income associated with the 2018/19 cohort, by level of study, domicile, and mode

Level and mode	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Full-time students						
Other undergraduate	£22,000	£24,000	**£24,000**	£0.0bn	£0.1bn	**£0.2bn**
First degree	£59,000	£64,000	**£62,000**	£2.0bn	£4.1bn	**£6.1bn**
Postgraduate (taught)	£31,000	£31,000	**£31,000**	£0.6bn	£3.5bn	**£4.1bn**
Postgraduate (research)	£71,000	£71,000	**£71,000**	£0.3bn	£0.8bn	**£1.0bn**
Average	**£50,000**	**£44,000**	**£45,000**			
Total				**£2.9bn**	**£8.5bn**	**£11.4bn**
Part-time students						
Other undergraduate	£74,000	£78,000	**£77,000**	£0.2bn	£0.5bn	**£0.7bn**
First degree	£125,000	£130,000	**£128,000**	£0.0bn	£0.0bn	**£0.1bn**
Postgraduate (taught)	£94,000	£94,000	**£94,000**	£0.3bn	£0.4bn	**£0.7bn**
Postgraduate (research)	£171,000	£166,000	**£168,000**	£0.1bn	£0.1bn	**£0.2bn**
Average	**£93,000**	**£89,000**	**£91,000**			
Total				**£0.6bn**	**£1.1bn**	**£1.7bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum because of rounding. ***Source: London Economics' analysis***

Table 27 Impact of visitor income associated with the 2018/19 cohort, by level of study, domicile, and mode

Level and mode	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Full-time students						
Other undergraduate	£1,000	£2,000	**£2,000**	£0.0bn	£0.0bn	**£0.0bn**
First degree	£3,000	£4,000	**£3,000**	£0.1bn	£0.2bn	**£0.3bn**
Postgraduate (taught)	£1,000	£2,000	**£2,000**	£0.0bn	£0.2bn	**£0.3bn**
Postgraduate (research)	£2,000	£3,000	**£3,000**	£0.0bn	£0.0bn	**£0.0bn**
Average	**£2,000**	**£3,000**	**£3,000**			
Total				**£0.1bn**	**£0.5bn**	**£0.7bn**
Part-time students						
Other undergraduate	£2,000	£3,000	**£3,000**	£0.0bn	£0.0bn	**£0.0bn**
First degree	£5,000	£7,000	**£6,000**	£0.0bn	£0.0bn	**£0.0bn**
Postgraduate (taught)	£2,000	£3,000	**£3,000**	£0.0bn	£0.0bn	**£0.0bn**
Postgraduate (research)	£5,000	£7,000	**£6,000**	£0.0bn	£0.0bn	**£0.0bn**
Average	**£3,000**	**£4,000**	**£3,000**			
Total				**£0.0bn**	**£0.0bn**	**£0.1bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum because of rounding. ***Source: London Economics' analysis***

A2.3 Costs by mode

The following tables present the costs of teaching grants, student support, and other public service provision associated with international students in the 2018/19 cohort (over their total study duration), per student and in aggregate, separately by domicile (EU versus non-EU), mode, and level of study.

Table 28 Teaching grant costs associated with the 2018/19 cohort, by level of study, domicile, and mode

Level and mode	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Full-time students						
Other undergraduate	£1,000	-	**£0**	£0.0bn	-	**£0.0bn**
First degree	£3,000	-	**£1,000**	£0.1bn	-	**£0.1bn**
Postgraduate (taught)	£1,000	-	**£0**	£0.0bn	-	**£0.0bn**
Postgraduate (research)	-	-	**-**	-	-	**-**
Average	**£2,000**	**-**	**£0**			
Total				**£0.1bn**	**-**	**£0.1bn**
Part-time students						
Other undergraduate	£1,000	-	**£0**	£0.0bn	-	**£0.0bn**
First degree	£2,000	-	**£1,000**	£0.0bn	-	**£0.0bn**
Postgraduate (taught)	£1,000	-	**£0**	£0.0bn	-	**£0.0bn**
Postgraduate (research)	-	-	**-**	-	-	**-**
Average	**£1,000**	**-**	**£0**			
Total				**£0.0bn**	**-**	**£0.0bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum because of rounding. '-' indicates values that are exactly equal to zero; '£0' indicates values that are *close* to zero in rounded terms. ***Source: London Economics' analysis***

Table 29 Student support costs associated with the 2018/19 cohort, by level of study, domicile, and mode

Level and mode	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Full-time students						
Other undergraduate	£3,000	-	**£0**	£0.0bn	-	**£0.0bn**
First degree	£8,000	-	**£3,000**	£0.3bn	-	**£0.3bn**
Postgraduate (taught)	£0	-	**£0**	£0.0bn	-	**£0.0bn**
Postgraduate (research)	£2,000	-	**£0**	£0.0bn	-	**£0.0bn**
Average	**£5,000**	**-**	**£1,000**			
Total				**£0.3bn**	**-**	**£0.3bn**
Part-time students						
Other undergraduate	£2,000	-	**£1,000**	£0.0bn	-	**£0.0bn**
First degree	£4,000	-	**£2,000**	£0.0bn	-	**£0.0bn**
Postgraduate (taught)	£0	-	**£0**	£0.0bn	-	**£0.0bn**
Postgraduate (research)	£1,000	-	**£0**	£0.0bn	-	**£0.0bn**
Average	**£1,000**	**-**	**£0**			
Total				**£0.0bn**	**-**	**£0.0bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. Estimates presented in 2018/19 prices and discounted into net present values. Totals may not sum because of rounding. '-' indicates values exactly equal to zero; '£0' indicates values that are zero once rounded. ***Source: London Economics' analysis***

Table 30 Other public costs associated with the 2018/19 cohort, by level of study, domicile and mode

Level and mode	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Full-time students						
Other undergraduate	£6,000	£4,000	**£4,000**	£0.0bn	£0.0bn	**£0.0bn**
First degree	£17,000	£10,000	**£13,000**	£0.6bn	£0.7bn	**£1.2bn**
Postgraduate (taught)	£6,000	£4,000	**£5,000**	£0.1bn	£0.5bn	**£0.6bn**
Postgraduate (research)	£16,000	£11,000	**£12,000**	£0.1bn	£0.1bn	**£0.2bn**
Average	**£13,000**	**£7,000**	**£8,000**			
Total				**£0.8bn**	**£1.3bn**	**£2.1bn**
Part-time students						
Other undergraduate	£35,000	£9,000	**£16,000**	£0.1bn	£0.1bn	**£0.1bn**
First degree	£60,000	£15,000	**£38,000**	£0.0bn	£0.0bn	**£0.0bn**
Postgraduate (taught)	£33,000	£10,000	**£20,000**	£0.1bn	£0.0bn	**£0.2bn**
Postgraduate (research)	£62,000	£19,000	**£38,000**	£0.0bn	£0.0bn	**£0.0bn**
Average	**£37,000**	**£10,000**	**£20,000**			
Total				**£0.2bn**	**£0.1bn**	**£0.4bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum because of rounding. ***Source: London Economics' analysis***

A2.4 Net impact by level of study

Table 31 presents the total impact of international students on the UK economy, by domicile and level of study. The total impact per EU domiciled first degree student was estimated at **£87,000**, compared to **£47,000** for a postgraduate taught degree. The comparative figures for non-EU students were **£164,000** for a first degree and **£67,000** for a postgraduate taught degree.

Table 31 Net impact associated with the 2018/19 cohort, by level of study and domicile

Level of study	£ per student			Total, £bn		
	EU	Non-EU	Average	EU	Non-EU	Total
Other undergraduate	£45,000	£82,000	**£74,000**	£0.2bn	£1.0bn	**£1.2bn**
First degree	£87,000	£162,000	**£136,000**	£2.9bn	£10.4bn	**£13.4bn**
Postgraduate (taught)	£47,000	£67,000	**£64,000**	£1.1bn	£8.0bn	**£9.1bn**
Postgraduate (research)	£104,000	£158,000	**£143,000**	£0.5bn	£1.8bn	**£2.3bn**
Average	**£71,000**	**£102,000**	**£95,000**			
Total				**£4.7bn**	**£21.3bn**	**£25.9bn**

Note: Values per student (weighted by the relevant student populations) are rounded to the nearest £1,000, and total values are rounded to the nearest £0.1 billion. All estimates are presented in 2018/19 prices and discounted to reflect net present values. Totals may not sum because of rounding.
Source: London Economics' analysis

A2.5 Total impact by parliamentary constituency

Table 32 presents the total impact of international students on the UK economy for each parliamentary constituency.

Table 32 Total net impact of international students by parliamentary constituency

	Parliamentary Constituency	Region	# of starters	Net impact
1	Berwick-upon-Tweed	North East	130	£12.8m
2	Bishop Auckland	North East	195	£19.1m
3	Blaydon	North East	225	£21.9m
4	Blyth Valley	North East	195	£19.1m
5	City of Durham	North East	1,445	£141.0m
6	Darlington	North East	215	£20.6m
7	Easington	North East	230	£22.9m
8	Gateshead	North East	410	£39.8m
9	Hartlepool	North East	250	£24.7m
10	Hexham	North East	170	£16.8m
11	Houghton and Sunderland South	North East	250	£24.3m
12	Jarrow	North East	240	£23.2m
13	Middlesbrough	North East	755	£73.8m
14	Middlesbrough South and East Cleveland	North East	250	£24.4m
15	Newcastle upon Tyne Central	North East	1,205	£117.7m
16	Newcastle upon Tyne East	North East	2,455	£240.4m
17	Newcastle upon Tyne North	North East	370	£36.1m
18	North Durham	North East	230	£22.5m
19	North Tyneside	North East	280	£27.4m
20	North West Durham	North East	215	£21.1m
21	Redcar	North East	245	£23.9m
22	Sedgefield	North East	175	£17.5m
23	South Shields	North East	285	£28.2m
24	Stockton North	North East	310	£30.2m
25	Stockton South	North East	410	£40.2m
26	Sunderland Central	North East	745	£72.9m
27	Tynemouth	North East	275	£26.8m
28	Wansbeck	North East	175	£17.4m
29	Washington and Sunderland West	North East	250	£24.5m
30	Altrincham and Sale West	North West	160	£17.3m
31	Ashton-under-Lyne	North West	170	£18.6m
32	Barrow and Furness	North West	100	£10.8m
33	Birkenhead	North West	160	£17.4m
34	Blackburn	North West	280	£30.4m
35	Blackley and Broughton	North West	420	£45.2m
36	Blackpool North and Cleveleys	North West	140	£15.1m
37	Blackpool South	North West	155	£16.7m
38	Bolton North East	North West	225	£24.4m
39	Bolton South East	North West	270	£28.8m
40	Bolton West	North West	160	£17.4m
41	Bootle	North West	220	£23.9m
42	Burnley	North West	160	£17.3m
43	Bury North	North West	160	£17.0m
44	Bury South	North West	190	£20.4m
45	Carlisle	North West	195	£21.3m
46	Cheadle	North West	185	£19.7m
47	Chorley	North West	140	£14.8m
48	City of Chester	North West	405	£43.7m
49	Congleton	North West	135	£14.8m
50	Copeland	North West	80	£8.4m
51	Crewe and Nantwich	North West	285	£30.9m
52	Denton and Reddish	North West	145	£15.5m
53	Eddisbury	North West	135	£14.4m
54	Ellesmere Port and Neston	North West	160	£17.0m
55	Fylde	North West	120	£13.2m
56	Garston and Halewood	North West	220	£23.6m
57	Halton	North West	170	£18.3m
58	Hazel Grove	North West	120	£12.9m
59	Heywood and Middleton	North West	190	£20.4m
60	Hyndburn	North West	175	£19.2m
61	Knowsley	North West	225	£24.3m
62	Lancaster and Fleetwood	North West	835	£90.3m
63	Leigh	North West	165	£17.5m
64	Liverpool, Riverside	North West	1,885	£203.3m
65	Liverpool, Walton	North West	240	£25.6m
66	Liverpool, Wavertree	North West	575	£62.0m
67	Liverpool, West Derby	North West	230	£25.1m
68	Macclesfield	North West	140	£15.1m
69	Makerfield	North West	145	£16.0m
70	Manchester Central	North West	1,950	£210.9m
71	Manchester, Gorton	North West	1,325	£143.3m
72	Manchester, Withington	North West	945	£102.0m
73	Morecambe and Lunesdale	North West	140	£15.5m
74	Oldham East and Saddleworth	North West	200	£21.6m
75	Oldham West and Royton	North West	240	£25.6m
76	Pendle	North West	165	£17.9m

Table 32 Continued

	Parliamentary Constituency	Region	# of starters	Net impact
77	Penrith and The Border	North West	105	£11.4m
78	Preston	North West	715	£77.3m
79	Ribble Valley	North West	145	£15.9m
80	Rochdale	North West	250	£27.3m
81	Rossendale and Darwen	North West	165	£17.7m
82	Salford and Eccles	North West	600	£64.8m
83	Sefton Central	North West	170	£18.3m
84	South Ribble	North West	155	£16.5m
85	Southport	North West	165	£17.7m
86	St Helens North	North West	165	£17.6m
87	St Helens South and Whiston	North West	175	£19.4m
88	Stalybridge and Hyde	North West	145	£16.1m
89	Stockport	North West	160	£17.2m
90	Stretford and Urmston	North West	230	£24.8m
91	Tatton	North West	130	£13.6m
92	Wallasey	North West	165	£17.8m
93	Warrington North	North West	185	£20.0m
94	Warrington South	North West	165	£17.6m
95	Weaver Vale	North West	135	£14.2m
96	West Lancashire	North West	350	£37.6m
97	Westmorland and Lonsdale	North West	100	£10.8m
98	Wigan	North West	170	£18.1m
99	Wirral South	North West	120	£13.0m
100	Wirral West	North West	115	£12.5m
101	Workington	North West	80	£8.8m
102	Worsley and Eccles South	North West	175	£19.1m
103	Wyre and Preston North	North West	175	£18.9m
104	Wythenshawe and Sale East	North West	225	£24.1m
105	Barnsley Central	Yorkshire and the Humber	180	£17.1m
106	Barnsley East	Yorkshire and the Humber	150	£14.6m
107	Batley and Spen	Yorkshire and the Humber	250	£24.2m
108	Beverley and Holderness	Yorkshire and the Humber	195	£18.8m
109	Bradford East	Yorkshire and the Humber	390	£37.9m
110	Bradford South	Yorkshire and the Humber	260	£25.0m
111	Bradford West	Yorkshire and the Humber	855	£83.1m
112	Brigg and Goole	Yorkshire and the Humber	135	£13.1m
113	Calder Valley	Yorkshire and the Humber	200	£19.4m
114	Cleethorpes	Yorkshire and the Humber	165	£16.5m

	Parliamentary Constituency	Region	# of starters	Net impact
115	Colne Valley	Yorkshire and the Humber	270	£26.2m
116	Dewsbury	Yorkshire and the Humber	370	£35.9m
117	Don Valley	Yorkshire and the Humber	165	£16.4m
118	Doncaster Central	Yorkshire and the Humber	220	£21.3m
119	Doncaster North	Yorkshire and the Humber	160	£15.7m
120	East Yorkshire	Yorkshire and the Humber	175	£16.6m
121	Elmet and Rothwell	Yorkshire and the Humber	175	£17.0m
122	Great Grimsby	Yorkshire and the Humber	225	£21.7m
123	Halifax	Yorkshire and the Humber	250	£24.1m
124	Haltemprice and Howden	Yorkshire and the Humber	260	£25.5m
125	Harrogate and Knaresborough	Yorkshire and the Humber	165	£16.5m
126	Hemsworth	Yorkshire and the Humber	150	£14.7m
127	Huddersfield	Yorkshire and the Humber	680	£66.1m
128	Keighley	Yorkshire and the Humber	215	£20.6m
129	Kingston upon Hull East	Yorkshire and the Humber	195	£18.9m
130	Kingston upon Hull North	Yorkshire and the Humber	855	£83.2m
131	Kingston upon Hull West and Hessle	Yorkshire and the Humber	225	£21.8m
132	Leeds Central	Yorkshire and the Humber	2,030	£197.6m
133	Leeds East	Yorkshire and the Humber	265	£25.7m
134	Leeds North East	Yorkshire and the Humber	310	£30.3m
135	Leeds North West	Yorkshire and the Humber	1,515	£147.5m
136	Leeds West	Yorkshire and the Humber	485	£47.0m
137	Morley and Outwood	Yorkshire and the Humber	165	£16.1m
138	Normanton, Pontefract and Castleford	Yorkshire and the Humber	155	£15.4m
139	Penistone and Stocksbridge	Yorkshire and the Humber	155	£15.0m
140	Pudsey	Yorkshire and the Humber	200	£19.8m
141	Richmond (Yorks)	Yorkshire and the Humber	140	£13.5m
142	Rother Valley	Yorkshire and the Humber	160	£15.5m
143	Rotherham	Yorkshire and the Humber	195	£19.3m
144	Scarborough and Whitby	Yorkshire and the Humber	260	£25.3m
145	Scunthorpe	Yorkshire and the Humber	185	£17.8m
146	Selby and Ainsty	Yorkshire and the Humber	155	£15.0m
147	Sheffield Central	Yorkshire and the Humber	2,980	£290.1m
148	Sheffield South East	Yorkshire and the Humber	215	£20.9m
149	Sheffield, Brightside and Hillsborough	Yorkshire and the Humber	310	£30.5m
150	Sheffield, Hallam	Yorkshire and the Humber	820	£79.7m
151	Sheffield, Heeley	Yorkshire and the Humber	270	£26.3m
152	Shipley	Yorkshire and the Humber	190	£18.6m

Table 32 Continued

	Parliamentary Constituency	Region	# of starters	Net impact
153	Skipton and Ripon	Yorkshire and the Humber	145	£13.9m
154	Thirsk and Malton	Yorkshire and the Humber	130	£12.7m
155	Wakefield	Yorkshire and the Humber	180	£17.2m
156	Wentworth and Dearne	Yorkshire and the Humber	160	£15.6m
157	York Central	Yorkshire and the Humber	1,100	£107.0m
158	York Outer	Yorkshire and the Humber	525	£50.8m
159	Amber Valley	East Midlands	150	£15.2m
160	Ashfield	East Midlands	180	£18.2m
161	Bassetlaw	East Midlands	185	£18.9m
162	Bolsover	East Midlands	165	£17.0m
163	Boston and Skegness	East Midlands	155	£15.3m
164	Bosworth	East Midlands	170	£17.7m
165	Broxtowe	East Midlands	380	£38.4m
166	Charnwood	East Midlands	235	£24.0m
167	Chesterfield	East Midlands	180	£18.3m
168	Corby	East Midlands	210	£21.2m
169	Daventry	East Midlands	170	£17.4m
170	Derby North	East Midlands	725	£73.7m
171	Derby South	East Midlands	375	£38.1m
172	Derbyshire Dales	East Midlands	125	£12.6m
173	Erewash	East Midlands	185	£18.5m
174	Gainsborough	East Midlands	160	£16.1m
175	Gedling	East Midlands	200	£20.7m
176	Grantham and Stamford	East Midlands	170	£17.7m
177	Harborough	East Midlands	420	£42.4m
178	High Peak	East Midlands	230	£23.6m
179	Kettering	East Midlands	165	£16.8m
180	Leicester East	East Midlands	495	£50.0m
181	Leicester South	East Midlands	1,795	£182.0m
182	Leicester West	East Midlands	675	£68.6m
183	Lincoln	East Midlands	890	£90.1m
184	Loughborough	East Midlands	1,275	£129.1m
185	Louth and Horncastle	East Midlands	150	£15.1m
186	Mansfield	East Midlands	195	£19.7m
187	Mid Derbyshire	East Midlands	160	£16.3m
188	Newark	East Midlands	210	£21.1m
189	North East Derbyshire	East Midlands	160	£16.5m
190	North West Leicestershire	East Midlands	195	£19.9m

	Parliamentary Constituency	Region	# of starters	Net impact
191	Northampton North	East Midlands	455	£46.3m
192	Northampton South	East Midlands	355	£35.8m
193	Nottingham East	East Midlands	1,345	£136.5m
194	Nottingham North	East Midlands	290	£29.6m
195	Nottingham South	East Midlands	2,575	£261.4m
196	Rushcliffe	East Midlands	390	£39.7m
197	Rutland and Melton	East Midlands	195	£19.8m
198	Sherwood	East Midlands	160	£16.5m
199	Sleaford and North Hykeham	East Midlands	180	£18.2m
200	South Derbyshire	East Midlands	185	£18.8m
201	South Holland and The Deepings	East Midlands	130	£13.1m
202	South Leicestershire	East Midlands	205	£20.8m
203	South Northamptonshire	East Midlands	185	£18.5m
204	Wellingborough	East Midlands	195	£19.6m
205	Aldridge-Brownhills	West Midlands	170	£16.9m
206	Birmingham, Edgbaston	West Midlands	1,115	£109.6m
207	Birmingham, Erdington	West Midlands	370	£36.1m
208	Birmingham, Hall Green	West Midlands	670	£65.8m
209	Birmingham, Hodge Hill	West Midlands	585	£57.8m
210	Birmingham, Ladywood	West Midlands	1,860	£183.5m
211	Birmingham, Northfield	West Midlands	325	£32.2m
212	Birmingham, Perry Barr	West Midlands	725	£71.9m
213	Birmingham, Selly Oak	West Midlands	1,505	£148.4m
214	Birmingham, Yardley	West Midlands	370	£36.3m
215	Bromsgrove	West Midlands	215	£21.3m
216	Burton	West Midlands	230	£22.7m
217	Cannock Chase	West Midlands	210	£20.7m
218	Coventry North East	West Midlands	575	£56.3m
219	Coventry North West	West Midlands	620	£61.1m
220	Coventry South	West Midlands	1,715	£168.8m
221	Dudley North	West Midlands	215	£21.2m
222	Dudley South	West Midlands	175	£17.2m
223	Halesowen and Rowley Regis	West Midlands	225	£22.0m
224	Hereford and South Herefordshire	West Midlands	230	£22.4m
225	Kenilworth and Southam	West Midlands	345	£33.8m
226	Lichfield	West Midlands	185	£18.3m
227	Ludlow	West Midlands	140	£13.8m
228	Meriden	West Midlands	250	£24.6m

Table 32 Continued

	Parliamentary Constituency	Region	# of starters	Net impact
229	Mid Worcestershire	West Midlands	190	£18.6m
230	Newcastle-under-Lyme	West Midlands	695	£68.7m
231	North Herefordshire	West Midlands	155	£15.0m
232	North Shropshire	West Midlands	240	£23.7m
233	North Warwickshire	West Midlands	180	£17.6m
234	Nuneaton	West Midlands	210	£20.5m
235	Redditch	West Midlands	230	£22.5m
236	Rugby	West Midlands	205	£20.2m
237	Shrewsbury and Atcham	West Midlands	235	£23.1m
238	Solihull	West Midlands	260	£26.0m
239	South Staffordshire	West Midlands	225	£22.1m
240	Stafford	West Midlands	435	£42.9m
241	Staffordshire Moorlands	West Midlands	165	£16.1m
242	Stoke-on-Trent Central	West Midlands	665	£65.1m
243	Stoke-on-Trent North	West Midlands	260	£26.0m
244	Stoke-on-Trent South	West Midlands	230	£22.8m
245	Stone	West Midlands	190	£18.9m
246	Stourbridge	West Midlands	215	£21.1m
247	Stratford-on-Avon	West Midlands	180	£17.3m
248	Sutton Coldfield	West Midlands	240	£23.6m
249	Tamworth	West Midlands	210	£21.0m
250	Telford	West Midlands	210	£20.9m
251	The Wrekin	West Midlands	350	£34.7m
252	Walsall North	West Midlands	230	£22.4m
253	Walsall South	West Midlands	400	£39.4m
254	Warley	West Midlands	395	£38.8m
255	Warwick and Leamington	West Midlands	725	£71.8m
256	West Bromwich East	West Midlands	280	£27.3m
257	West Bromwich West	West Midlands	255	£24.9m
258	West Worcestershire	West Midlands	200	£19.6m
259	Wolverhampton North East	West Midlands	340	£33.4m
260	Wolverhampton South East	West Midlands	300	£29.7m
261	Wolverhampton South West	West Midlands	490	£48.6m
262	Worcester	West Midlands	520	£51.2m
263	Wyre Forest	West Midlands	195	£19.4m
264	Basildon and Billericay	East of England	155	£15.2m
265	Bedford	East of England	480	£46.8m
266	Braintree	East of England	160	£15.6m

	Parliamentary Constituency	Region	# of starters	Net impact
267	Brentwood and Ongar	East of England	185	£17.8m
268	Broadland	East of England	145	£14.1m
269	Broxbourne	East of England	245	£24.0m
270	Bury St Edmunds	East of England	185	£18.3m
271	Cambridge	East of England	2,180	£214.0m
272	Castle Point	East of England	135	£13.0m
273	Central Suffolk and North Ipswich	East of England	170	£16.4m
274	Chelmsford	East of England	280	£27.8m
275	Clacton	East of England	125	£12.4m
276	Colchester	East of England	640	£62.9m
277	Epping Forest	East of England	250	£24.3m
278	Great Yarmouth	East of England	190	£18.5m
279	Harlow	East of England	200	£19.3m
280	Harwich and North Essex	East of England	410	£40.4m
281	Hemel Hempstead	East of England	230	£22.2m
282	Hertford and Stortford	East of England	220	£21.7m
283	Hertsmere	East of England	345	£33.9m
284	Hitchin and Harpenden	East of England	205	£20.1m
285	Huntingdon	East of England	215	£20.7m
286	Ipswich	East of England	295	£28.6m
287	Luton North	East of England	390	£38.1m
288	Luton South	East of England	875	£86.2m
289	Maldon	East of England	140	£13.4m
290	Mid Bedfordshire	East of England	325	£31.4m
291	Mid Norfolk	East of England	155	£14.9m
292	North East Bedfordshire	East of England	190	£19.0m
293	North East Cambridgeshire	East of England	165	£16.1m
294	North East Hertfordshire	East of England	185	£18.2m
295	North Norfolk	East of England	105	£10.3m
296	North West Cambridgeshire	East of England	220	£21.9m
297	North West Norfolk	East of England	160	£15.7m
298	Norwich North	East of England	185	£18.2m
299	Norwich South	East of England	1,105	£108.0m
300	Peterborough	East of England	280	£27.5m
301	Rayleigh and Wickford	East of England	140	£14.0m
302	Rochford and Southend East	East of England	250	£24.4m
303	Saffron Walden	East of England	215	£21.1m
304	South Basildon and East Thurrock	East of England	185	£18.2m

Table 32 Continued

	Parliamentary Constituency	Region	# of starters	Net impact
305	South Cambridgeshire	East of England	355	£35.0m
306	South East Cambridgeshire	East of England	205	£20.4m
307	South Norfolk	East of England	155	£15.4m
308	South Suffolk	East of England	140	£13.5m
309	South West Bedfordshire	East of England	230	£22.4m
310	South West Hertfordshire	East of England	230	£22.3m
311	South West Norfolk	East of England	160	£16.0m
312	Southend West	East of England	170	£16.3m
313	St Albans	East of England	265	£25.9m
314	Stevenage	East of England	235	£23.2m
315	Suffolk Coastal	East of England	145	£14.5m
316	Thurrock	East of England	245	£24.2m
317	Watford	East of England	355	£35.0m
318	Waveney	East of England	170	£16.6m
319	Welwyn Hatfield	East of England	1,095	£107.5m
320	West Suffolk	East of England	200	£19.2m
321	Witham	East of England	150	£14.6m
322	Barking	London	940	£85.3m
323	Battersea	London	645	£58.8m
324	Beckenham	London	290	£26.6m
325	Bermondsey and Old Southwark	London	2,020	£183.7m
326	Bethnal Green and Bow	London	1,935	£176.3m
327	Bexleyheath and Crayford	London	360	£32.7m
328	Brent Central	London	1,285	£116.9m
329	Brent North	London	1,355	£123.3m
330	Brentford and Isleworth	London	1,040	£94.5m
331	Bromley and Chislehurst	London	335	£30.2m
332	Camberwell and Peckham	London	1,385	£125.8m
333	Carshalton and Wallington	London	385	£35.1m
334	Chelsea and Fulham	London	850	£77.0m
335	Chingford and Woodford Green	London	430	£38.9m
336	Chipping Barnet	London	630	£57.5m
337	Cities of London and Westminster	London	1,490	£135.7m
338	Croydon Central	London	620	£56.5m
339	Croydon North	London	1,115	£101.1m
340	Croydon South	London	495	£44.9m
341	Dagenham and Rainham	London	515	£47.0m
342	Dulwich and West Norwood	London	755	£68.6m

	Parliamentary Constituency	Region	# of starters	Net impact
343	Ealing Central and Acton	London	945	£85.8m
344	Ealing North	London	830	£75.2m
345	Ealing, Southall	London	945	£85.9m
346	East Ham	London	2,385	£217.0m
347	Edmonton	London	905	£82.3m
348	Eltham	London	645	£58.6m
349	Enfield North	London	590	£54.0m
350	Enfield, Southgate	London	745	£67.9m
351	Erith and Thamesmead	London	825	£75.0m
352	Feltham and Heston	London	960	£87.0m
353	Finchley and Golders Green	London	920	£83.5m
354	Greenwich and Woolwich	London	1,210	£110.2m
355	Hackney North and Stoke Newington	London	1,085	£98.8m
356	Hackney South and Shoreditch	London	1,255	£114.2m
357	Hammersmith	London	1,275	£116.1m
358	Hampstead and Kilburn	London	1,025	£93.4m
359	Harrow East	London	770	£69.8m
360	Harrow West	London	815	£74.3m
361	Hayes and Harlington	London	895	£81.7m
362	Hendon	London	1,185	£107.7m
363	Holborn and St Pancras	London	2,670	£242.7m
364	Hornchurch and Upminster	London	370	£33.6m
365	Hornsey and Wood Green	London	920	£83.7m
366	Ilford North	London	645	£58.7m
367	Ilford South	London	1,360	£123.6m
368	Islington North	London	945	£86.2m
369	Islington South and Finsbury	London	1,520	£138.3m
370	Kensington	London	1,180	£107.5m
371	Kingston and Surbiton	London	1,310	£119.3m
372	Lewisham East	London	660	£59.9m
373	Lewisham West and Penge	London	625	£56.9m
374	Lewisham, Deptford	London	1,405	£128.1m
375	Leyton and Wanstead	London	1,065	£96.9m
376	Mitcham and Morden	London	800	£72.6m
377	Old Bexley and Sidcup	London	400	£36.4m
378	Orpington	London	265	£24.3m
379	Poplar and Limehouse	London	1,345	£122.6m
380	Putney	London	820	£74.8m

Table 32 Continued

	Parliamentary Constituency	Region	# of starters	Net impact
381	Richmond Park	London	770	£70.1m
382	Romford	London	355	£32.3m
383	Ruislip, Northwood and Pinner	London	395	£36.0m
384	Streatham	London	820	£74.5m
385	Sutton and Cheam	London	360	£33.0m
386	Tooting	London	855	£77.7m
387	Tottenham	London	1,380	£125.4m
388	Twickenham	London	650	£59.0m
389	Uxbridge and South Ruislip	London	1,420	£129.4m
390	Vauxhall	London	1,155	£105.2m
391	Walthamstow	London	945	£86.1m
392	West Ham	London	2,330	£211.9m
393	Westminster North	London	1,055	£95.9m
394	Wimbledon	London	485	£44.1m
395	Aldershot	South East	240	£23.8m
396	Arundel and South Downs	South East	150	£14.9m
397	Ashford	South East	215	£21.3m
398	Aylesbury	South East	205	£20.1m
399	Banbury	South East	215	£21.0m
400	Basingstoke	South East	190	£18.8m
401	Beaconsfield	South East	200	£19.7m
402	Bexhill and Battle	South East	160	£15.8m
403	Bognor Regis and Littlehampton	South East	215	£21.2m
404	Bracknell	South East	185	£18.4m
405	Brighton, Kemptown	South East	750	£74.0m
406	Brighton, Pavilion	South East	1,360	£133.8m
407	Buckingham	South East	215	£21.0m
408	Canterbury	South East	1,545	£152.1m
409	Chatham and Aylesford	South East	225	£22.4m
410	Chesham and Amersham	South East	165	£16.3m
411	Chichester	South East	350	£34.8m
412	Crawley	South East	220	£21.7m
413	Dartford	South East	205	£20.1m
414	Dover	South East	185	£18.4m
415	East Hampshire	South East	170	£16.9m
416	East Surrey	South East	190	£19.0m
417	East Worthing and Shoreham	South East	185	£18.0m
418	Eastbourne	South East	365	£35.7m

	Parliamentary Constituency	Region	# of starters	Net impact
419	Eastleigh	South East	195	£19.2m
420	Epsom and Ewell	South East	295	£29.2m
421	Esher and Walton	South East	220	£21.9m
422	Fareham	South East	205	£20.2m
423	Faversham and Mid Kent	South East	155	£15.3m
424	Folkestone and Hythe	South East	235	£23.1m
425	Gillingham and Rainham	South East	385	£38.1m
426	Gosport	South East	185	£18.4m
427	Gravesham	South East	220	£21.4m
428	Guildford	South East	900	£88.8m
429	Hastings and Rye	South East	240	£23.4m
430	Havant	South East	170	£16.6m
431	Henley	South East	165	£16.3m
432	Horsham	South East	180	£17.3m
433	Hove	South East	335	£33.1m
434	Isle of Wight	South East	225	£22.4m
435	Lewes	South East	165	£16.5m
436	Maidenhead	South East	180	£17.3m
437	Maidstone and The Weald	South East	210	£20.8m
438	Meon Valley	South East	165	£16.5m
439	Mid Sussex	South East	185	£18.1m
440	Milton Keynes North	South East	320	£31.6m
441	Milton Keynes South	South East	280	£27.7m
442	Mole Valley	South East	160	£15.7m
443	New Forest East	South East	145	£14.0m
444	New Forest West	South East	125	£12.1m
445	Newbury	South East	150	£15.2m
446	North East Hampshire	South East	145	£14.5m
447	North Thanet	South East	190	£18.6m
448	North West Hampshire	South East	145	£14.5m
449	Oxford East	South East	2,135	£210.6m
450	Oxford West and Abingdon	South East	695	£68.4m
451	Portsmouth North	South East	250	£24.6m
452	Portsmouth South	South East	1,635	£161.1m
453	Reading East	South East	980	£96.7m
454	Reading West	South East	220	£21.4m
455	Reigate	South East	185	£18.0m
456	Rochester and Strood	South East	310	£30.6m

Table 32 Continued

	Parliamentary Constituency	Region	# of starters	Net impact
457	Romsey and Southampton North	South East	755	£74.2m
458	Runnymede and Weybridge	South East	640	£63.0m
459	Sevenoaks	South East	165	£16.0m
460	Sittingbourne and Sheppey	South East	185	£18.3m
461	Slough	South East	520	£51.7m
462	South Thanet	South East	240	£23.9m
463	South West Surrey	South East	260	£25.8m
464	Southampton, Itchen	South East	760	£75.3m
465	Southampton, Test	South East	1,065	£105.2m
466	Spelthorne	South East	170	£16.7m
467	Surrey Heath	South East	195	£19.1m
468	Tonbridge and Malling	South East	170	£17.2m
469	Tunbridge Wells	South East	210	£20.9m
470	Wantage	South East	170	£16.7m
471	Wealden	South East	170	£17.2m
472	Winchester	South East	550	£53.9m
473	Windsor	South East	220	£21.5m
474	Witney	South East	160	£15.8m
475	Woking	South East	240	£23.7m
476	Wokingham	South East	215	£21.2m
477	Worthing West	South East	170	£17.1m
478	Wycombe	South East	460	£45.6m
479	Bath	South West	1,030	£104.7m
480	Bournemouth East	South West	420	£42.9m
481	Bournemouth West	South West	790	£79.9m
482	Bridgwater and West Somerset	South West	145	£15.0m
483	Bristol East	South West	310	£31.8m
484	Bristol North West	South West	440	£44.3m
485	Bristol South	South West	225	£22.8m
486	Bristol West	South West	1,720	£174.6m
487	Camborne and Redruth	South West	240	£24.7m
488	Central Devon	South West	110	£10.8m
489	Cheltenham	South West	485	£49.3m
490	Chippenham	South West	140	£14.2m
491	Christchurch	South West	110	£11.2m
492	Devizes	South West	120	£12.0m
493	East Devon	South West	120	£12.1m
494	Exeter	South West	1,060	£107.6m

	Parliamentary Constituency	Region	# of starters	Net impact
495	Filton and Bradley Stoke	South West	360	£36.7m
496	Forest of Dean	South West	160	£16.0m
497	Gloucester	South West	260	£26.2m
498	Kingswood	South West	140	£14.1m
499	Mid Dorset and North Poole	South West	115	£11.7m
500	Newton Abbot	South West	120	£12.0m
501	North Cornwall	South West	120	£12.5m
502	North Devon	South West	125	£12.8m
503	North Dorset	South West	115	£11.5m
504	North East Somerset	South West	170	£17.6m
505	North Somerset	South West	135	£13.4m
506	North Swindon	South West	155	£15.5m
507	North Wiltshire	South West	115	£11.6m
508	Plymouth, Moor View	South West	195	£20.0m
509	Plymouth, Sutton and Devonport	South West	1,170	£119.1m
510	Poole	South West	170	£17.2m
511	Salisbury	South West	125	£12.8m
512	Somerton and Frome	South West	135	£13.5m
513	South Dorset	South West	120	£12.5m
514	South East Cornwall	South West	140	£14.5m
515	South Swindon	South West	190	£19.3m
516	South West Devon	South West	145	£15.1m
517	South West Wiltshire	South West	125	£12.7m
518	St Austell and Newquay	South West	160	£16.3m
519	St Ives	South West	135	£13.6m
520	Stroud	South West	145	£14.7m
521	Taunton Deane	South West	195	£19.8m
522	Tewkesbury	South West	155	£15.5m
523	The Cotswolds	South West	185	£19.0m
524	Thornbury and Yate	South West	125	£12.6m
525	Tiverton and Honiton	South West	100	£10.6m
526	Torbay	South West	145	£14.7m
527	Torridge and West Devon	South West	120	£12.1m
528	Totnes	South West	115	£11.9m
529	Truro and Falmouth	South West	395	£40.0m
530	Wells	South West	160	£16.0m
531	West Dorset	South West	115	£11.6m
532	Weston-Super-Mare	South West	185	£19.1m

Table 32 Continued

	Parliamentary Constituency	Region	# of starters	Net impact
533	Yeovil	South West	130	£13.1m
534	Ynys Mon	Wales	175	£15.3m
535	Delyn	Wales	145	£12.8m
536	Alyn and Deeside	Wales	180	£15.4m
537	Wrexham	Wales	270	£23.7m
538	Llanelli	Wales	180	£15.6m
539	Gower	Wales	190	£16.7m
540	Swansea West	Wales	1,260	£110.2m
541	Swansea East	Wales	220	£19.4m
542	Aberavon	Wales	140	£12.1m
543	Cardiff Central	Wales	2,070	£181.0m
544	Cardiff North	Wales	575	£50.2m
545	Rhondda	Wales	205	£18.0m
546	Torfaen	Wales	170	£14.9m
547	Monmouth	Wales	155	£13.6m
548	Newport East	Wales	265	£23.5m
549	Newport West	Wales	300	£26.1m
550	Arfon	Wales	695	£61.0m
551	Aberconwy	Wales	135	£11.8m
552	Clwyd West	Wales	165	£14.5m
553	Vale of Clwyd	Wales	185	£16.3m
554	Dwyfor Meirionnydd	Wales	110	£9.6m
555	Clwyd South	Wales	165	£14.5m
556	Montgomeryshire	Wales	100	£8.7m
557	Ceredigion	Wales	895	£78.0m
558	Preseli Pembrokeshire	Wales	135	£11.8m
559	Carmarthen West and South Pembrokeshire	Wales	210	£18.5m
560	Carmarthen East and Dinefwr	Wales	140	£12.4m
561	Brecon and Radnorshire	Wales	115	£9.9m
562	Neath	Wales	165	£14.6m
563	Cynon Valley	Wales	185	£16.4m
564	Merthyr Tydfil and Rhymney	Wales	185	£16.5m
565	Blaenau Gwent	Wales	145	£12.8m
566	Bridgend	Wales	180	£15.5m
567	Ogmore	Wales	155	£13.4m
568	Pontypridd	Wales	465	£40.4m
569	Caerphilly	Wales	195	£17.0m
570	Islwyn	Wales	165	£14.3m

	Parliamentary Constituency	Region	# of starters	Net impact
571	Vale of Glamorgan	Wales	225	£19.7m
572	Cardiff West	Wales	310	£27.2m
573	Cardiff South and Penarth	Wales	390	£34.2m
574	Aberdeen North	Scotland	1,705	£141.4m
575	Aberdeen South	Scotland	785	£65.1m
576	Airdrie and Shotts	Scotland	285	£23.4m
577	Angus	Scotland	260	£21.6m
578	Argyll and Bute	Scotland	180	£14.8m
579	Ayr, Carrick and Cumnock	Scotland	305	£25.5m
580	Banff and Buchan	Scotland	220	£18.5m
581	Berwickshire, Roxburgh and Selkirk	Scotland	245	£20.3m
582	Caithness, Sutherland and Easter Ross	Scotland	105	£8.7m
583	Central Ayrshire	Scotland	315	£26.2m
584	Coatbridge, Chryston and Bellshill	Scotland	345	£28.4m
585	Cumbernauld, Kilsyth and Kirkintilloch East	Scotland	360	£29.8m
586	Dumfries and Galloway	Scotland	185	£15.6m
587	Dumfriesshire, Clydesdale and Tweeddale	Scotland	165	£13.8m
588	Dundee East	Scotland	470	£39.1m
589	Dundee West	Scotland	1,470	£122.0m
590	Dunfermline and West Fife	Scotland	280	£23.0m
591	East Dunbartonshire	Scotland	400	£33.2m
592	East Kilbride, Strathaven and Lesmahagow	Scotland	390	£32.4m
593	East Lothian	Scotland	355	£29.5m
594	East Renfrewshire	Scotland	450	£37.2m
595	Edinburgh East	Scotland	1,890	£156.8m
596	Edinburgh North and Leith	Scotland	965	£79.8m
597	Edinburgh South	Scotland	1,295	£107.5m
598	Edinburgh South West	Scotland	1,205	£100.1m
599	Edinburgh West	Scotland	365	£29.9m
600	Falkirk	Scotland	315	£26.3m
601	Glasgow Central	Scotland	2,065	£171.2m
602	Glasgow East	Scotland	405	£33.5m
603	Glasgow North	Scotland	1,595	£132.2m
604	Glasgow North East	Scotland	600	£49.7m
605	Glasgow North West	Scotland	590	£48.9m
606	Glasgow South	Scotland	455	£37.9m
607	Glasgow South West	Scotland	420	£35.1m
608	Glenrothes	Scotland	280	£22.9m

Table 32 Continued

	Parliamentary Constituency	Region	# of starters	Net impact
609	Gordon	Scotland	280	£23.1m
610	Inverclyde	Scotland	365	£30.2m
611	Inverness, Nairn, Badenoch and Strathspey	Scotland	215	£17.7m
612	Kilmarnock and Loudoun	Scotland	350	£29.0m
613	Kirkcaldy and Cowdenbeath	Scotland	300	£24.9m
614	Lanark and Hamilton East	Scotland	330	£27.0m
615	Linlithgow and East Falkirk	Scotland	290	£24.2m
616	Livingston	Scotland	345	£28.4m
617	Midlothian	Scotland	235	£19.5m
618	Moray	Scotland	200	£16.7m
619	Motherwell and Wishaw	Scotland	320	£26.7m
620	Na h-Eileanan An Iar	Scotland	55	£4.5m
621	North Ayrshire and Arran	Scotland	340	£28.2m
622	North East Fife	Scotland	1,085	£90.2m
623	Ochil and South Perthshire	Scotland	270	£22.3m
624	Orkney and Shetland	Scotland	65	£5.1m
625	Paisley and Renfrewshire North	Scotland	380	£31.6m
626	Paisley and Renfrewshire South	Scotland	450	£37.3m
627	Perth and North Perthshire	Scotland	285	£23.9m
628	Ross, Skye and Lochaber	Scotland	105	£8.8m
629	Rutherglen and Hamilton West	Scotland	365	£30.5m
630	Stirling	Scotland	800	£66.4m
631	West Aberdeenshire and Kincardine	Scotland	245	£20.3m
632	West Dunbartonshire	Scotland	345	£28.7m
633	Belfast East	Northern Ireland	135	£9.9m
634	Belfast North	Northern Ireland	160	£12.2m
635	Belfast South	Northern Ireland	595	£44.4m
636	Belfast West	Northern Ireland	190	£14.1m
637	East Antrim	Northern Ireland	190	£14.2m
638	East Londonderry	Northern Ireland	230	£17.2m
639	Fermanagh & South Tyrone	Northern Ireland	150	£11.3m
640	Foyle	Northern Ireland	240	£17.8m
641	Lagan Valley	Northern Ireland	145	£10.8m
642	Mid Ulster	Northern Ireland	185	£13.7m
643	Newry & Armagh	Northern Ireland	185	£13.7m
644	North Antrim	Northern Ireland	150	£11.2m
645	North Down	Northern Ireland	120	£9.1m
646	South Antrim	Northern Ireland	145	£10.7m
647	South Down	Northern Ireland	175	£13.1m
648	Strangford	Northern Ireland	120	£9.2m
649	Upper Bann	Northern Ireland	185	£13.6m
650	West Tyrone	Northern Ireland	145	£10.8m

Note: Number of students are rounded to the nearest five and total values are rounded to the nearest £0.1 million. All estimates are presented in 2018/19 prices and discounted to reflect net present values.
Source: London Economics' analysis

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