

Title: Removing home fee status and access to student finance in England for EU, other EEA, and Swiss nationals IA No: DfE120 RPC Reference No: RPC-DfE-5036(1) Lead department or agency: Department for Education Other departments or agencies:	Impact Assessment (IA)			
	Date: 08/02/2021			
	Stage: Final			
	Source of intervention: Domestic			
	Type of measure: Secondary Legislation			
Contact for enquiries: james.cox@education.gov.uk				
Summary: Intervention and Options			RPC Opinion: Green	

Cost of Preferred (or more likely) Option (in 2020 prices)			
Total Net Present Social Value	Business Net Present Value	Net cost to business per year	Business Impact Target Status: Qualifying Provision
-£2.6bn	-£800m	-£140m	

What is the problem under consideration? Why is government action or intervention necessary?

As a consequence of EU Exit, the UK will no longer have a justification to provide home fee status and student financial support for courses starting in academic year 2021/22 in England to EU, other EEA and Swiss nationals who are not covered by the Withdrawal Agreements (the EU Withdrawal Agreement, EEA-EFTA Separation Agreement and Swiss Citizens' Rights Agreement). This change will not apply to Irish citizens living in the UK and Ireland whose right to study and to access benefits and services will be preserved on a reciprocal basis for British and Irish citizens under the Common Travel Area arrangement.

What are the policy objectives of the action or intervention and the intended effects?

To remove eligibility in regulations for courses starting in or after academic year 2021/22 for home fee status and student finance from Student Finance England for EU, other EEA and Swiss nationals not covered by the Withdrawal agreements, and also for children of Turkish workers arriving after the end of the transition period. This change will deregulate the limit on fees that providers can charge and allow them to determine the appropriate fee rate. It will also remove access to taxpayer funded financial support by those who are no longer entitled in law to receive it.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Option 0 – Do nothing. This does not meet the Government's objectives, and now that the UK has left the EU and will no longer have the legal obligations of membership, it is fair to place EU students not covered by the Withdrawal Agreements on the same footing as other countries.

Option 1 – Preferred option. Remove eligibility for home fee status and access to undergraduate and postgraduate financial support and advanced learner loans from Student Finance England for EU, other EEA and Swiss nationals not covered by the Withdrawal Agreements from the 2021/22 academic year, and also for children of Turkish workers arriving after the end of the transition period. This option meets Government policy to meet the current EU principles of equal treatment for those covered by citizens' rights provisions in the Withdrawal Agreements, and removes access from those to whom the Government no longer have a justification to support on a preferential basis.

Will the policy be reviewed? N If applicable, set review date:					
Does implementation go beyond minimum EU requirements?		N/A			
Is this measure likely to impact on international trade and investment?		N			
Are any of these organisations in scope?		Micro N	Small N	Medium Y	Large Y
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)		Traded: N/A		Non-traded: N/A	

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister 

Date: 14th December

Summary: Analysis & Evidence

Policy Option 1

Description:

FULL ECONOMIC ASSESSMENT

Price Base Year 20/21	PV Base Year 20/21	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: -£0.2bn	High: -£5.5bn	Best Estimate: -£2.6bn

COSTS (£m)	Total Transition		Average Annual	Total Cost
Low	£1m		£700m	£7.0bn
High	£7m		£1,510m	£15.1bn
Best Estimate	£4m		£1,080m	£10.8bn

Description and scale of key monetised costs by 'main affected groups'

HE and FE providers: Loss of tuition fee income associated fall in EU students, estimated to be £3.9bn, plus familiarisation costs.

Exchequer: During their studies EU students contribute to public finances, largely through indirect tax contributions. Loss of tax contributions because of fewer EU students is estimated at £2.4bn.

Loss in living expenditure. EU students contribute to the economy through living expenditure. Loss of living expenditure because of fewer EU students is estimated at £4.4bn (net of taxes).

Other key non-monetised costs by 'main affected groups'

Wider Economy: The projected loss in EU student enrolments will impact the wider economy by reducing the talent pipeline for UK employers and research, and may reduce the UK's soft power.

BENEFITS (£m)	Total Transition		Average Annual	Total Benefit
Low			£690m	£6.8bn
High			£960m	£9.6bn
Best Estimate			£820m	£8.2bn

Description and scale of key monetised benefits by 'main affected groups'

HE and FE providers: Gain in tuition fee income due to charging EU students international fees, which is estimated to be £3.1bn.

Exchequer: A reduction in EU student numbers saves public provision costs (such as healthcare), estimated to save the public purse £5.0bn. Of this, removing access to student loans for EU students is estimated to save taxpayers £2.2bn.

Other key non-monetised benefits by 'main affected groups'

Wider Economy: Less EU students may reduce congestion on public transport, for example.

Key assumptions/sensitivities/risks	Discount rate (%)	3.5
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Behavioural impacts are highly uncertain, therefore estimates should be treated as indicative and ranges have been applied to capture the uncertainty. Providers may adjust their recruitment practices in order to offset the potential loss in EU students. The analysis accounts for the introduction of the new points-based immigration system in January 2021, but not changes to the graduate route (due to be evaluated by the Home Office). The baseline is also uncertain as forecasting international student numbers is challenging due to their dependency on a wide range of uncertain external factors, including any future impact of the Covid pandemic.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m: -138.1			Score for Business Impact Target (qualifying provisions only) £m: -690.7
Costs: 0.4	Benefits: 133.9	Net: 133.5	

A. Strategic overview

A.1 Background

1. Higher and Further Education (HE and FE, respectively) is a devolved policy. This means that the exact entitlement and eligibility for tuition fees and student arrangements for European Union (EU), other European Economic Area (EEA) and Swiss nationals may vary across the Devolved Administrations. This impact assessment (IA) concerns the impact of removing home fee status and access to financial support from Student Finance England from EU, other EEA, and Swiss nationals.
2. To comply with existing obligations under EU law up to the end of the transition period the Government has provided support to EU, other EEA and Swiss nationals on broadly the same basis as is available to UK nationals. Currently EU nationals choosing to pursue a HE or FE course at an English Provider are eligible for home fee status and student finance (tuition fee loans) if they have been ordinarily resident in the EEA or Switzerland for at least three years immediately before the start of their course. They are eligible in addition for maintenance support (loans for living costs) if they have resided in the UK or Islands (the Crown Dependencies) for at least 5 years immediately before the start of their course. EEA or Swiss migrant or frontier workers or family members thereof are eligible for maintenance support after three years' residence in the EEA and Switzerland.
3. These groups will continue to be eligible if they are covered by Citizens' Rights arrangements, subject to meeting the usual residency requirements. Such persons will generally be EU, other EEA or Swiss nationals (and their family members) who have arrived in the UK before 31 December 2020, and (with the exception of children of Turkish workers) will be eligible for the UK's EU Settlement Scheme (EUSS), to which they need to apply for status by 30 June 2021.
4. Following the UK's decision to leave the EU, EU, other EEA and Swiss nationals who are not covered by the Withdrawal Agreements (the Withdrawal Agreement, EEA-EFTA Separation Agreement and Swiss Citizens' Rights Agreement) will not be eligible for home fee status, undergraduate or postgraduate financial support nor advanced learner loans from Student Finance England for courses starting in academic year 2021/22. This change will not apply to Irish citizens living in the UK and Ireland whose right to study and to access benefits and services will be preserved on a reciprocal basis for British and Irish citizens under the Common Travel Area arrangement.

A.2 Groups affected

5. The main groups that would be affected by the policy area are:
 - EU, other EEA, and Swiss students not covered by the Withdrawal Agreement
 - UK and non-EU students
 - English Higher and Further Education providers
 - Taxpayers
 - Wider Economy

B. Rationale for intervention

6. Now that the UK has left the EU and will no longer have the legal obligations of membership, it is fair to place EU, other EEA and Swiss students not covered by the Withdrawal Agreements on the same footing as those from other countries.
7. This policy change will standardise the rules which govern the rights of international students to access home fee status and student financial support. It provides greater clarity to those persons who are eligible and not eligible to access home fee status and student finance and creates an equitable system for students outside the UK when they apply to study a course at English HE and FE providers.
8. Loan support for EU, other EEA and Swiss students involves a taxpayer subsidy, which was previously justified on the grounds that EU membership required them to be treated equally with UK nationals and the associated benefits accrue to the UK economy and offset the cost. There are significantly fewer UK students studying in EU member states versus EU students coming to the UK to study. Some 140,000 EU domiciled students are enrolled in UK higher education – about 6% of all undergraduate students¹, and around 18,000 UK students are on full HE courses in the whole of the EU². The costs to the UK are therefore significantly higher than the costs to other EU member states.
9. Approximately 3 out of 10 EU domiciled students that remain in the UK are in sustained employment after graduating³. The economic rationale for EU, other EEA and Swiss students' access to loan support was previously predicated on their ability to join the workforce without restriction due to EU free movement rights, and as a result contribute to the economy and the Exchequer. Now the UK has left the EU this will no longer happen to the same degree and there is no legal requirement to give equal treatment.
10. In general, it is harder to recover loan payments from EU, other EEA and Swiss students as many return to their home state. Repayment of loans is usually arranged through the UK tax system but is less effective for those living outside the UK as the Student Loans Company (SLC) relies on alternatives which are not as efficient.
11. If the UK Government were to continue to offer access to student finance to EU, other EEA and Swiss nationals not covered by the Withdrawal Agreements now the UK has left the EU, it would not be fair to other international students on the basis that there is no justification for preferential treatment to EU, other EEA and Swiss nationals.

C. Policy objective

12. The broad objectives of the changes are to:
 - Reflect the changes following the UK's exit from the EU
 - Ensure EU, other EEA, and Swiss nationals can apply for home fee status and student finance if they are covered by Citizens' Rights and meet the eligibility requirements.
 - Create an equitable system for international students, including EU, other EEA and Swiss students, that are living outside the UK.

¹ HESA, 2018/19 <https://www.hesa.ac.uk/data-and-analysis/sb255/figure-8>

² UNESCO <http://uis.unesco.org/en/uis-student-flow>

³ 31% of EU domiciled students that remain in the UK are in sustained employment only, three years after graduating. DfE Graduate Outcomes 2017/18. <https://www.gov.uk/government/statistics/graduate-outcomes-leo-2017-to-2018>

- Reduce the taxpayer subsidy in terms of the Resource Accounting Budget (RAB) that is not repaid by EU, other EEA and Swiss nationals living outside the UK.
- Deregulate the limit on fees that English HE and FE providers can charge and allow them to determine the appropriate fee rate.

13. The main measures of success are that:

- All students are clear about the rules and guidance on what they are and are not eligible to receive, leading to a decline in the number of enquiries to the Student Loans Company and sector about interpretation of the rules.
- Remove student loan subsidies for those where there is no longer a justification for preferential treatment, saving the taxpayer money.

D. Options considered

14. The options considered for this final stage IA are as follows.

Option 0: Do nothing

15. No intervention would result in continuing to provide home fee status and access to undergraduate and postgraduate student financial support, and advanced learner loans from Student Finance England to EU, other EEA and Swiss nationals if they have been ordinarily resident in the EEA or Switzerland for at least three years immediately before the start of their course.
16. Under this option, the Government would not fulfil its aim to create a more equitable system which governs access to education for international students. This option also provides taxpayer funding to those to whom the UK no longer has an EU law obligation to provide it and could be unfair to others who are not eligible. The 'do nothing' option is therefore not considered to be a viable option.

Option 1: Preferred option

17. This option removes eligibility for home fee status and access to undergraduate, postgraduate, and advanced learner financial support from Student Finance England for EU, other EEA and Swiss nationals not covered by the Withdrawal Agreements from the 2021/22 academic year and also for children of Turkish workers arriving after the end of the transition period. This is the preferred option, which allows the Government to achieve its policy objectives to meet the current EU principles of equal treatment for those covered by citizens' rights provisions in the Withdrawal Agreements. The rationale for this position is that:

- The UK has left the EU and there is therefore no obligation under EU law to continue to fund EU, other EEA and Swiss nationals not covered by Citizens' Rights.
- We are ensuring all international students residing outside the EEA and Switzerland, receive the same treatment as those in the EEA and Switzerland. Removing home fees status is a deregulatory measure that involves removing the fee limit in regulations that the sector can charge EU, other EEA and Swiss nationals who come to study in England, thereby treating them the same as other international students.
- Loan support for EU, other EEA and Swiss students involves a considerable taxpayer subsidy. In general, it is harder to recover loan payments from EU, other EEA and Swiss students as many return to their home state.

18. The preferred option will be implemented through regulations and will require an update to the eligibility categories for home fee status and those who have access to financial support from

Student Finance England. The Student Loans Company will update its systems to comply with the amended regulation.

E. Appraisal

19. This IA looks at the impact of removing home fee status and access to students finance on EU-domiciled student enrolment at HE and FE providers in England. The appraisal period is from Academic Year (AY) 2021/22 to 2030/31 a period of 10-years.

E.1 Scope of analysis

E1.1 EU-domiciled students

20. EU-domiciled students (from here on EU students) are used as a proxy to estimate the number of students in scope of the policy changes. These are students with a permanent address in the EU prior to entering their course⁴.
21. This analysis focuses on the number of EU students, as there is a lack of data to predict the impact on other EEA and Swiss students. This is due to these persons only being eligible for student finance and home fee status if they are a migrant or frontier worker or a family member thereof. Other EEA and Swiss nationals who do not fall into this category, and who do not have settled status, are currently not eligible for home fee status and student finance. According to Higher Education Statistics Authority (HESA), there were 6,820 other EEA- and Switzerland-domiciled at English HE providers in 2018/19⁵. It is not possible from the data to tell how many of these students are eligible for home fee status and student loans (e.g. who are migrant workers), but it is likely to be small.

E1.2 Higher Education

22. In 2018/19, according to the Student Loan Company (SLC), 355 providers had EU students with undergraduate and postgraduate loans. Of these 131 were Higher Education Institutions (HEIs), 119 were Further Education Colleges (FECs), 55 were Alternative Providers (APs) and 50 were unclassified⁶.
23. In 2018/19, 66,000 EU undergraduates and postgraduates received £532m in English student support. Loans to EU borrowers at HEIs represented 98% of this total.
24. The analysis focuses on the impact of the policy changes on EU students studying at HEIs. EU students are examined across all levels (i.e. undergraduate, postgraduate taught and postgraduate research) and modes (full-time and part-time) within HE, but those studying at FECs and APs are excluded from this analysis. There is currently limited student and tuition fee data available for non-HEIs, and therefore, it is difficult to estimate the impacts of removing home fee status and access to HE student finance. The impact of excluding these providers on the overall figures are likely small. Using a variety of sources available, the Department for Education's (DfE) best assessment is around 95% of all EU undergraduates and postgraduates study at HEIs⁷.

E1.2 Further Education

25. FE learners may qualify for an Advanced Learner Loan from Student Finance England if they are an EU, other EEA or Swiss national or a family member of one or a UK national, or someone with

⁴ See <https://www.hesa.ac.uk/support/definitions/students> for definition.

⁵ See <https://www.hesa.ac.uk/data-and-analysis/students/where-from> - Norway 3236, Switzerland 3,360, Iceland 210 and Liechtenstein 15.

⁶ Internal analysis by the Department for Education.

⁷ A combination of HESA (<https://www.hesa.ac.uk/data-and-analysis/students>), HESES (<https://www.officeforstudents.org.uk/data-and-analysis/data-collection/heses/>) and SLC (<https://www.gov.uk/government/organisations/student-loans-company/about/statistics>) data is used.

UK settled status, but they exercised their right of free movement to live somewhere else in the EEA or Switzerland.

26. In the academic year 2018/19, Further Education Learning Providers in England were paid Advanced Learner Loans on behalf of around 9,100 EU domiciled students which amounted to £22.4m, with an average amount paid of £2,480 per learner⁸.
27. Intelligence from stakeholder groups suggest that most EU national students are already living in the UK before they start their FE course. So unlike HE, FE does not have the same pull-factor: it is considered that few EU students travel to England with the primary aim of studying and taking up an adult FE course immediately. The analysis therefore does not model any fiscal or living expenditure impacts as it assumes the policy changes do not impact the number of EU nationals living in the UK. Tuition fee impacts and familiarisation costs are modelled.

E1.3 Home Office migration polices

28. As well as changes to home fee status and access to student finance, freedom of movement will also end for EEA students. Consequent to the end of free movement, and in support of the Government's Future Border and Immigration System (FBIS), the current Immigration Rules relating to students required updating and simplification.
29. On 5th October 2020, a new student route opened under a points-based immigration system that treats EU and non-EU students equally⁹. The impact on EU student volumes and the associated costs and benefits of the student route have been measured by the Home Office (HO)¹⁰. The model underpinning the HO's analysis was developed jointly with the DfE. DfE uses the same model to measure the additional impacts of removing home fee status and access to student finance in England. The impacts published in the HO's analysis are UK-wide and not directly comparable with the numbers in this IA, which are England only.
30. On 11 September 2019, HO announced the creation of a new immigration route which will enable international students to remain in the UK for two years (three years for doctorate students) after they have successfully completed their studies at degree level or above with a higher education provider with a track record of compliance¹¹. The impact of this new Graduate Route will be measured by HO ahead of its launch. This analysis does not account for any changes to levels of student recruitment as a result of the announcement of the Graduate Route, as it is outside the scope of DfE policy.
31. Since the analysis presented here is a continuation of modelling published by the HO, certain sections in this IA and the HO's are intentionally kept the same or very similar.

E.2 Analytical framework to understand the costs and benefits of the policy changes

32. The total number of EU students studying at English HEIs has increased by 18% between academic year 2014/15 and 2018/19¹². In academic year 2018/19 around 112,000 EU students were enrolled at HEIs in England, which is 6% of total student population. Of these 78,000 were undergraduates and 35,000 were postgraduate.
33. Approximately 74% of EU students and 17% of EU postgraduates take out student loans (see

⁸SLC, Advanced Learner Loans Paid In England, Academic year 2019/20

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/895196/slcosp032020.pdf

⁹ Further details about the UK Points-based immigration system can be found at <https://www.gov.uk/government/collections/uk-points-based-immigration-system-further-details>

¹⁰ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/916601/IA_-_students.pdf.

¹¹ <https://homeofficemedia.blog.gov.uk/2019/10/14/fact-sheet-graduate-immigration-route/>

¹² HESA <https://www.hesa.ac.uk/data-and-analysis/students/where-from>

Annex K.6 for more detail)¹³. In 2018/19, EU students received £520m in English student support. Loans to EU borrowers represent 3% of total HE student loans¹⁴.

34. Not all student loans are paid back in full. There is a cost to the Exchequer from EU students taking out student loans. This analysis assumes that the RAB charge for EU students is the same as the entire loan population, that is 53% for undergraduates and 0% for postgraduates¹⁵. There is no separate EU calculation for the RAB charge. Whether the RAB for EU students is lower or higher than the general population is uncertain. On the one hand, the loan outlay is smaller for EU students (since most are not eligible for maintenance loans), so they are more likely to pay off their loan in full. On the other hand, EU students are more likely to live abroad and be in arrears. The DfE's best estimate is that these two opposite effects cancel out.
35. EU fees are an important source of income for the HE sector. In 2018/19, tuition fees from EU students at English HEIs accounted for £1.2bn of income, which is 3% of total income. The share of EU fee income ranges across providers from 0% to 29% of total income¹⁶.
36. EU students currently pay the same tuition fees as home students, which are significantly lower than international (non-EU) fees. HEIs set their own fee levels so the difference between home and international prices vary across providers. For example, international fees for undergraduates are around 50% to 160% higher than home fees, on average (see Annex K.5).
37. The DfE's exports publication estimates that EU HE students in the UK contributed £2.0bn to the economy in 2017 through living expenditure (latest available data)¹⁷. London Economics analysis estimates that EU students contribute £55,000 to the economy in non-tuition fee income (living expenditure) on average over the duration of their studies, this includes the knock-on effects that their spending has¹⁸.
38. EU students also incur costs to the economy associated with the provision of public services, including health care, housing, primary and secondary education received by dependent children, social security, and other public services (e.g. defence). This is discussed in more detail in Annex K.9.
39. Overall, the evidence shows that EU students are net economic contributors - the economic benefits outweigh the public and fiscal costs. London Economics' estimate that the net economic benefit of an average EU student is £68,000 (this includes multiplier impacts). Aggregating this across the whole cohort, the total net economic impact of EU students on the UK economy is around £4.0bn¹⁹.
40. After their studies, around 3 out of 10 EUs students that remain in the UK are in sustained employment one year after graduating (under current freedom of movement rules)²⁰. The UK keeps skilled graduates, who earn high wages. On average EU graduates are earning £30,300 per annum

¹³ Internal analysis by the Department for Education, due to methodological differences these do not match with publicly available figures. These new estimates are produced for consistency with the analysis in this IA.

¹⁴ <https://www.gov.uk/government/statistics/student-support-for-higher-education-in-england-2019>.

¹⁵ <https://explore-education-statistics.service.gov.uk/find-statistics/student-loan-forecasts-for-england/2019-20>

¹⁶ <https://www.hesa.ac.uk/data-and-analysis/finances/income>.

¹⁷

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/850263/SFR_Education_Exports_2017_FINAL.pdf.

¹⁸ <https://londoneconomics.co.uk/wp-content/uploads/2018/01/International-students-parliamentary-constituency.pdf>.

¹⁹ <https://londoneconomics.co.uk/wp-content/uploads/2018/01/International-students-parliamentary-constituency.pdf>.

²⁰ 31% of EU domiciled students that remain in the UK are in sustained employment only, three years after graduating. DfE Graduate Outcomes 2017/18. <https://www.gov.uk/government/statistics/graduate-outcomes-leo-2017-to-2018>

five years after graduating – this is over £3,000 higher than the equivalent UK figure²¹.

41. EU students that continue to work in the UK after their studies will pay taxes to the Exchequer. Such individuals tend to be relatively young with no dependent children, so when they enter the labour force they account for very little expenditure on health and school-level education. London Economics estimated that the 2016/17 cohort of EU graduates contributed £1.2bn to the UK in tax revenue (around £108,000 per graduate)²².
42. Removing home fee status and access to students' loans is expected to have a detrimental impact on EU student numbers in England. Without home fee status, EU students pay higher international fees which makes studying in England more expensive and therefore a less attractive study destination compared to competitor countries. Without access to student loans, EU students must either pay tuition fees upfront or find alternative finance arrangements. Some EU students will be unable to secure the funds needed to come and study in England. Others may not be willing to pay the upfront costs and choose to study elsewhere.
43. The key costs and benefits associated with reduction of EU student numbers and introduction of international fees are quantified (where possible) in the rest of this analysis and summarised in Table 1 below.

²¹ DfE Graduate Outcomes 2017/18. <https://www.gov.uk/government/statistics/graduate-outcomes-leo-2017-to-2018>

²² <https://londoneconomics.co.uk/wp-content/uploads/2019/03/LE-The-UK-tax-revenues-from-international-students-FINAL-15-03-2019.pdf>.

Table 1: Main costs and benefits of policy changes by group affected

Affected Group	Benefit	Cost
EU students		Must pay higher tuition fee. No longer have access to student finance. Cost of study is higher in England, making it a less attractive study destination. Fall in number of EU students in England.
HE and FE Providers in England	Removal of Home Fee Status means providers can charge EU students higher, international fees. Increase in fee income from EU students that still choose to come to study in England after policy changes.	Loss of fee income associated with the fall in number of EU students in England. Familiarisation costs.
Taxpayers	EU students can no longer access loans that are subsidised by the taxpayer, saving the Exchequer money. Fewer EU students means lower provision of public services.	Fewer EU students means lower tax revenue from dependent and student living expenditure. Less EU students will work in England after Graduation, resulting in lower tax receipts (not quantified).
Wider Economy		Loss of living expenditure associated with a reduction in EU students.

E.3 Evidence base

44. The DfE commissioned London Economics to estimate the impact on EU enrolments resulting from the removal of home fee status and access to student finance and restrictions of post-study work arrangements and the rights to bring dependents²³. London Economics estimated that all policy changes would reduce first-year EU students by approximately 60% (22,700 fewer EU undergraduates and 12,800 fewer EU postgraduates). The aggregate loss of tuition fee income associated with this fall was estimated to be around £200m per cohort.
45. The model used in this IA, which was developed jointly with HO, is an extension of London Economics’ analysis. The difference between the model used in this IA and London Economics’ model are twofold. First, this model can measure the impact to multiple cohorts, allowing us to evaluate the impact of the policy changes over a ten-year appraisal period. Second, it can measure the wider economic impacts of the policy changes (e.g. non-tuition fee impacts such as Exchequer impacts).
46. London Economics developed an econometric framework that estimates several coefficients used to model EU student behaviour. Using panel data, they regress full-time EU student numbers on tuition fees and the switch from an upfront fee to loan system (dummy), controlling for other

²³ London Economis, February 2021, EU Exit: estimating the impact on UK higher education.

variables such as exchange rates and GDP. They find that full-time EU undergraduates and postgraduates have a price elasticity of -0.35 and -0.26, respectively. That is, a 1% increase in tuition fees charged to EU undergraduates is associated with a decrease of 0.35% in student numbers. A switch from an up-front fee system to a loan system is associated with an 14.5% increase in EU undergraduate students. These coefficients are significant at the 5% level.

47. To capture the variation in student behaviour across sector, London Economics group HEIs into four distinct clusters. These clusters are defined by Boliver (2015)²⁴ and are based on differences in characteristics such as research activity, teaching quality, economic resource, academic selectivity, and socio-economic student mix (See Annex K.2 for more detail). The composition of the clusters are as follows:

- Cluster 1 – Oxford and Cambridge
- Cluster 2 – Rest of the Russell Group and around 80% of pre-1992 universities
- Cluster 3 – 20% of pre-1992 and 70% of post-1992 universities
- Cluster 4 – 30% of post-1992.

48. The 95% confidence intervals from the LE coefficients are split into four equal segments, and each cluster is assigned the mid-point from a different segment. It is assumed that EU students in Cluster 1 are less sensitive, and students in Cluster 4 and the most sensitive, to the removal of the access of student loans and home fee status. Figures 1 to 3 outline the coefficients by cluster.

Figure 1: Price elasticity of demand for tuition fees (undergraduates)

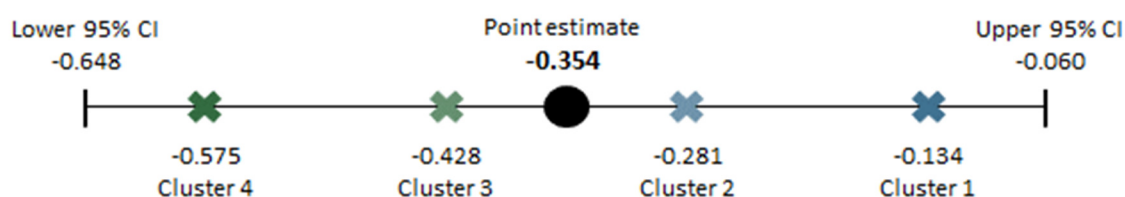


Figure 2: Switch from loan system to upfront payments (undergraduates)

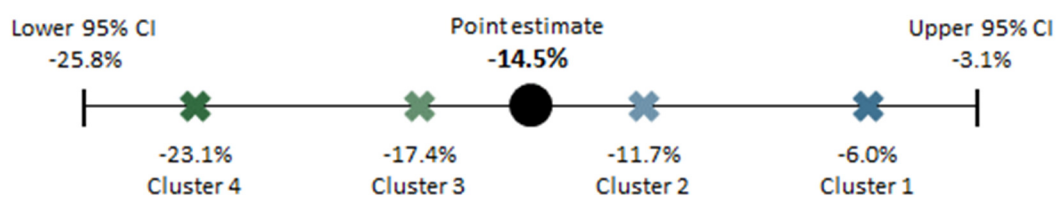
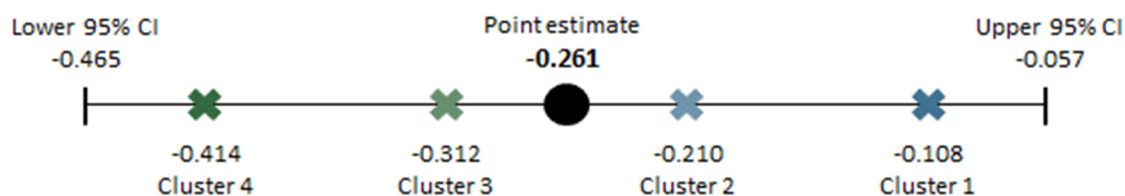


Figure 3: Price elasticity of demand for tuition fees (postgraduates)



²⁴ <https://dro.dur.ac.uk/14978/>.

E.4 Behavioural Assumptions

49. This section outlines the remaining modelling assumptions and assumptions regarding behavioural responses from HEIs and EU students to the removal of home fee status and access to student loans. These following assumptions form the basis of the analysis.
- EU students behave according to the cluster coefficients calculated by London Economics (Figures 1-3). This analysis assumes that full-time and part-time students behave in the same way, which means the same coefficients are used for part-time EU students.
 - The analysis does not account for the wider behavioural responses of HEIs to fee and finance changes, such as whether they will adjust their recruitment practices to mitigate the potential reduction in EU student enrolments. However, sensitivity analysis has been conducted on this assumption in Section G.2. The analysis also does not provide granularity on modes of study, gender, or specific nationalities as there is no available evidence on how these subsets of international students specifically, would respond to the policy changes. The analysis only estimates the impact of policy changes to the sector, and it does not account for impacts on individual institutions.
 - This analysis assumes that EU students would only use the new Immigration System in Academic Year 2021/22, as any EU student who wishes to start a course before that (that is, academic year 2020/21) are assumed to have applied to the EUSS and will therefore not require a study visa. This is an uncertain working assumption but given the uncertainty of this and of COVID-19 impacts (see G.1), any impacts from this year's intake are expected to be small.

E.5 Volumes

50. To measure the impact of the policies on EU students in higher education and further education, a baseline in the absence of any policy intervention has been modelled. The change in the volume of EU students because of the policies is then measured against the baseline to assess the potential impacts to institutions, the exchequer, and the wider economy.

E5.1 Higher Education

51. The baseline projections of first-year EU student enrolments is based on historical trend data from HESA between the academic years 2000/01 and 2017/18. HESA collects data from HEIs in the UK. The baseline is the same as used by HO, but only includes EU students at English HEIs. More information on the methodology of the analysis can be found in Annex K.3.
52. *Removing access to student finance* support will have a detrimental impact on EU student numbers. Without access to student finance, EU students will need to pay tuition fees upfront or find alternative finance arrangements. Some students will be unable to secure the funds needed to come and study in the UK. Others may not be willing to pay the upfront costs and choose to study elsewhere.
53. To estimate the impact removing student finance this analysis models a switch from a student loan to an up-front cash payment. This has two impacts:
- *Switch from loan system to an upfront payment.* Econometric analysis by London Economics found that a switch from an up-front fee system to a loan system is associated with an 14.5% increase in EU undergraduate students. This analysis assumes the reciprocal effect is identical. This is adjusted by the proportion of EU undergraduates who do not take out student loans. To account for variation of

behaviour across clusters the analysis uses the segmented figures in Figure 2. The same figures are used for postgraduate students.

- *Increase in the effective fee.* The removal of a student loan effectively increases the amount of tuition fee an EU student pays. They now must pay the full amount because they are no longer being subsidised by the taxpayer. This effective increase in fees will deter EU students from coming to study in England. See Annex K.7 for how the analysis calculates these impacts.

54. *Removing home fee status* could also reduce EU student inflows. As mentioned earlier, this policy change could see some EU students paying three times more on tuition fees (depending on the HEI and level of study). To quantify this impact on student enrolments, the analysis multiplies the percentage increase in tuition fees by level of study and cluster by the relevant price elasticities from Figures 1 and 3. The modelling captures the possible variation in elasticities across providers by using the cluster estimates. In total, the impact of removing home fee status is estimated to reduce EU entrants by 14% to 80% depending on the cluster and level of study. See Annex K.7 for the full methodology and more detailed breakdowns.
55. In total, this analysis considers the following five deterrents: applying visa fees and the Immigration Health Surcharge (IHS), post-study work arrangements, restrictions to bring dependents, removing access to student finance and removing home fee status. The first three have already been measured in the HO's IA and the costs and benefits are not quantified in this analysis. This IA only considers the additional impacts of removing student finance and home fee status from the baseline, factoring in the HO reductions. Combining the DfE's and HO's analysis, the estimated impacts of the various policy changes are as follows (Table 2).

Table 2: Impacts to EU student inflow by policy change and owner

Policy owners	Deterrent to EU students	Reduction in flow of EU students
Home Office	Applying visa fees and the IHS	2-5%
	Post-study work arrangements	16-19%
	Restrictions on the rights to bring dependants	<5%
Department for Education	Removing access to student finance	1%-54%*
	Removing home fee status	14%-80%*

* Figures vary by cluster and level of study (see Annex K.7 for more detail)

56. These percentage reductions are multiplied by the baseline to calculate the reduction in EU student flows. Overall, the reduction in EU student flows are estimated to be around 66% per year, this is around 30,000 to 35,000²⁵ fewer first-year EU students per year (combined DfE and HO policy changes). This is broadly consistent with London Economics analysis²⁶, which estimated a 60% reduction.
57. This IA only measures the impacts relating to the DfE's policies (i.e. removing access to student finance and home fee status). Given the multiplicative nature of the estimates, the aggregate impact of the policy changes are unaffected by the sequencing on when they are applied to the baseline. However, the impact of a given policy change does depend on its sequencing. Now that all policy changes have been announced, the most pragmatic approach is to weight the relative size of the five impacts and to proportion this across the total reduction. Applying this calculation, the policies DfE is responsible for account for around two-thirds of the total reduction in inflows.

²⁵ This 30,000 to 35,000 figure is the central estimate. Unless stated otherwise, the main text uses central figures. However, there is a large amount of uncertainty associated with forecasting baseline EU student numbers and estimating policy impacts, which is why sensitivity analysis is undertaken later in the analysis.

²⁶ London Economis, February 2021, EU Exit: estimating the impact on UK higher education.

58. This analysis only considers the impact on England, whereas the HO analysis applies to the UK. Therefore, it is not possible to draw direct comparisons between the estimated fall in EU student numbers.
59. To estimate the longer-term impact of reduced inflows on the stock of EU student migrants in HE, expected length of study data is applied to the change in inflows, leading to an estimate of around between 60,000 to 70,000 fewer EU HE students in England in the long run stock, relative to the baseline, a decrease of around 45% (this measures DfE policies only). However, HEIs may adjust their recruitment practices to target more non-EU students to offset the reduction in EU students, so the overall impact on international student numbers is unclear.
60. These estimates also do not account for the impact of other potential government policies, such as the introduction of the graduate route which could have a positive impact on international student volumes.

E5.2 Further Education

61. There is currently limited data on the volume of EU students in further education in the UK as colleges are not currently required to collect this data and therefore it is difficult to estimate how many students will be affected by the policy changes. This analysis assumes a baseline of 9,100 EU learners accessing Advanced Learner Loans (ALLs) per year i.e. the 2018/19 cohort²⁷ remains constant over the appraisal period.
62. Due to lack of data it is difficult to predict the impact of removing access to ALLs for EU FE learners, therefore the analysis uses an upper and lower bound estimate. The upper bound assumes a maximum loss in EU learners, with all learners who would have accessed a loan no longer enrolling in FE at English providers. The analysis also considers a scenario in which only 50% of learners who would have accessed a loan no longer enrol as the lower bound.
63. Applying these reductions to the baseline, the reduction in EU student flows are estimated to be around 5,000 to 9,000 per year.

E.6 Costs

64. The following section sets out the economic costs of the proposed removal of home fee status and access to student finance for EU students. It estimates the economic impact of the proposed changes on tuition fee income of universities, the Exchequer impact, and some wider economic impacts. The quantified can be found below.

E6.1 Familiarisation costs

65. There will be familiarisation for providers as they better understand the changes to home fee status and student finance. The Student Loans Company also offer Higher and Further Education providers with a direct relationship manager to provide support and advice. Providers rely on this expertise and this minimises the burden on providers.
66. DfE estimates that guidance for change to home fee status and home fee status will be around 8,000 to 16,000 words, with a central estimate of 12,000. It is estimated that this would take a member of staff between 10-90 minutes to read²⁸.

²⁷ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/812045/slcosp032019.pdf

²⁸ Reading speeds are determined using <http://www.readingsoft.com/>. This analysis assumes that staff working at universities are good readers and are therefore able to read 400 words per minute.

Table 3: Estimated reading time for student finance guidance

	Number of words	Speed (words per minute)	Total time (minutes)
High	16,000	240	94
Central	12,000	400	37
Low	8,000	1000	13

67. We also assume the material will be read by 5-20 employees with a central estimate of 10 at the provider whose time is worth between £15 to £38 per hour. There is a degree of uncertainty regarding the types of occupations that HE staff who review student finance rules are working in. It is assumed an average hourly salary across three different occupations²⁹, based on hourly ASHE data for 2020³⁰. A Eurostat uplift of 18 per cent is applied to account for non-wage costs³¹. The average gross wage used is £30 per hour.
68. Multiplying the hourly salary by the number of employees and the number of institutions impacted (355, see Section E1.2), the total familiarisation costs will comfortably be less than £1m in year 1 only. Under Option 0 ('No nothing'), there is also assumed to be guidance to read informing providers there is no change to student finance regulation, therefore the net familiarisation costs are lower than estimated.

E6.2 Set-up costs

69. In addition to familiarisation costs, providers may also be required to update their systems to change fee structures and information for prospective students. They may also have to respond to queries from current and prospective students.
70. These set up costs will vary significantly between providers depending on the size of the provider, the number and type of staff needed and the systems they already have in place. This analysis assumes the set-up costs will be between one FTE for 1 month and one FTE for 6 months, with a central estimate of one FTE for 3 months per provider. It assume the provider's time is worth between £460 and £1,120 per week. There is a degree of uncertainty regarding the types of occupations that HE staff who will have these responsibilities are working in. It is assumed an average weekly salary across five different occupations³². The Eurostat uplift is also applied resulting in an average weekly wage of £850.
71. Multiplying the weekly salary by the number of FTE and providers, the total set up costs are between £1m and £7m with a central estimate of £4m in year 1 only.

E6.3 Loss in tuition fee income – reduction in EU students

72. The removal of home fee status and access to student loans is estimated to reduce the number of EU students coming to English HEIs which would lead to a fall in projected tuition fee income for providers. For HEIs, the estimated reduction in the stock of EU students due to removing EU student finance and home fee status is estimated to be 60,000 per year, on average (central). The loss of income is calculated by multiplying the loss of student numbers by the average fees, which

²⁹ These occupations are '2311 Higher education teaching professionals', '2419 Legal professionals' and '4138 Human Resources Administrative Occupations'.

³⁰ <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/occupation4digitsoc2010ashtable14>
<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/2020>

³¹ <https://0.0.0.1/appso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>

³² These occupations are '2311 Higher education teaching professionals', '2419 Legal professionals', '4138 Human Resources Administrative Occupations', '313 Information technology technicians' and '213 Information technology and telecommunications professionals'.

are adjusted for inflation based on latest policy intentions (see Annex K.8 for more detail). This is estimated to lead to a reduction in projected fee income of between £2.4bn and £5.3bn with a central estimate of £3.8bn (10-year PV, 2020/21 prices) over the ten-year appraisal period.

73. At an institutional level, the loss of tuition fee income will likely be felt differently across providers. Some providers are more reliant on EU students fee income and may find it harder to retain EU students after the policy changes.
74. These estimates assume that there is a reduction in EU student enrolments, and that HEIs do not adjust their recruitment practices to mitigate this reduction. However, sensitivity analysis has been conducted in section G.2 to show scenarios where universities may adjust their recruitment practices to target more international students to offset the fall in EU students; given the relative size of home versus international tuition fees, a small increase in international students could offset the reduction in EU tuition fee income. HEIs may also offer more places to international students as whole, and therefore the overall impact on student numbers is uncertain.
75. For FECs teaching FE, the analysis projects a reduction in fee income of between £90m and £190m (10-year PV, 2020/21 prices) over the ten-year appraisal period, for the lower and upper bound. DfE does not have data on the average tuition fee prices for FECs, so it is assumed that the average EU tuition fee is equal to the average ALL paid to EU domiciled students³³.

E6.4 Loss in Exchequer income

76. EU students (and their dependents) who do come to study in England will also contribute to the public finances, largely through indirect tax contributions. As the analysis estimates a reduction in EU students, this suggests there will be a loss in exchequer income from fewer EU students coming to the UK. This is estimated to lead to a cost of between £1.6bn and £3.4bn, over the 10-year period, with a central estimate of £2.4bn. Further information on the methodology of calculating fiscal impacts can be found in Annex K.9.

E6.5 Loss in living expenditure

77. EU students also contribute to the economy through living expenditure (i.e. the goods and services they consume while studying). As the analysis estimates a reduction in EU students, this suggests there will be a loss in living expenditure for the economy. This is estimated to lead to a cost of £4.4bn over the 10-year period under the central scenario. The living expenditure calculations are net of any tax contributions to avoid double counting costs in Section E6.4. They also include the living expenditure of dependents. The approach for estimating living expenditure is the same taken as DfE's publication "UK education related exports and transnational education activity"³⁴. Further information on the methodology of calculating living expenditure impacts can be found in Annex K.10.
78. This analysis does not account for changes in living expenditure due to the loss in FE EU students. It is known from stakeholder groups that most EU national students are already living in the UK before they start their course. Therefore, it is considered that few EU students travel to England with the primary aim of studying and taking up an adult FE course immediately. The analysis therefore assumes these students continue to contribute to the economy through living expenditure.

E6.6 Total costs

79. The total costs are estimated to be between £7.0bn and £15.1bn over the 10-year appraisal period, with a central estimate of £10.8bn (10-year PV, 20/21 prices).

³³ For 2018/19 this was £2,480.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/895196/slcosp032020.pdf

³⁴ <https://www.gov.uk/government/statistics/uk-revenue-from-education-related-exports-and-tne-activity-2017>

E7. Benefits

80. The following section sets out the economic benefits of removing student finance and home fee status for EU students. It estimates the offsetting gain in tuition fee income of universities from charging higher international fees and the public service cost savings to the exchequer. The quantified can be found below.

E7.1 Tuition fee income increase – harmonising EU and non-EU fees

81. The loss of EU students associated with removing student finance and home fee status costs HEIs an estimated £390m in reduced fee income, on average per year (PV, 20/21 prices). However, an estimated 50,000 EU students would continue to study in England in 2030/31. These students will pay higher international fees, partly offsetting the fee income loss associated with fewer EU students.
82. As discussed, international fees are significantly higher than home fees (see Annex K.5), however, there are wide variations across providers. To measure the impact of harmonising fees between EU and non-EU students the fee income associated with the remaining EU students is uplifted (i.e. the ones that would still come to the study in England given the policy changes) by the difference in home and international fees at the cluster level. This is estimated to increase projected tuition fee income by between £3.0bn and £3.1bn with a central estimate of £3.1bn (10-year PV, 2020/21 prices) over the ten-year appraisal period.

E7.2 Public service provision savings

83. EU students who do come to study in England will also incur public service provision costs, such as healthcare and education (i.e. student loans). As the analysis estimates a reduction in EU students, this suggests that there will be a saving in public provision costs from fewer EU students coming to study in England. Overall, the removal of home fee status and access to student loans is estimated to lead to a cost saving of between £3.8bn and £6.6bn with a central estimate of £5.0bn (10-year PV, 2020/21 prices). Of this, £2.2bn is from removing access to student loans, which is an average saving of £220m per year (PV, 2020/21 prices).

E7.3 Total benefits

84. The total benefits are estimated to be between £6.8bn and £9.6bn, with a central estimate of around £8.2bn (10-year PV, 2020/21 prices). All the total benefits are estimated to be ongoing benefits.

E8. Summary of results

E8.1 Net Present Social Value (NPSV)

85. Under the central assumptions, the estimated total quantified benefits and costs are £8.2bn and £10.8bn, respectively, which provides an NPSV of around -£2.6bn over the 10-year appraisal period. These are net impacts to DfE policies only – removing access to student loans and home fee status, HO changes to visa system are out of scope of this IA and have been evaluated separately.
86. As there is inherent uncertainty with economic modelling, analysis has been conducted to estimate an upper and lower bound, which arbitrarily adjust the central assumptions. The lower bound models a scenario which uses a lower forecasted baseline projection of EU students than the central scenario (more information on the volume scenarios can be found in the Annex K.1) and assumes EU students are 25% less responsive to student finance and fee changes (in other words the elasticities in Figures 1 to 3 are reduced by 25%, see Annex K.7 for more detail). The high

scenario considers a larger baseline than the central projection and assumes EU students are 25% more responsive to the policy changes than the central assumption.

87. Table 4 compares the average annual stock EU student numbers under the low, central and high scenario. The baseline EU student average ranges from 110,000 to 160,000. The loss of EU students due to HO and DfE policies ranges from 60,000 to 110,000. The loss attributed to DfE policies only ranges from 40,000 to 80,000, that is, from 35% of the baseline to 50%, depending on how responsive EU students are to policy changes .

Table 4: Average annual stock of EU student numbers from AY21/22 to 30/31 in England at HEIs under the low, central and high scenarios

	Low	Central	High
Baseline	110,000	130,000	160,000
Loss of EU students (HO and DfE policies)	60,000	90,000	110,000
Loss of EU students (DfE policies only)	40,000	60,000	80,000

88. Table 5 shows the impact of the different scenarios on the NPSV. The scenarios outlined here do not show the full extent of the range of impacts Section G.2 looks at the potential impacts as a result of the behavioural responses of providers to the policy changes.

Table 5: Cost and benefits of Option 1 under low, central, and high-volume assumptions (PV, 2021/22 prices), £ billion, 2021/22 to 2030/31

Discounted values – 2021/22 prices	Low	Central	High
Benefit			
Tuition fee increase from charging higher international fees	£3.0bn	£3.1bn	£3.1bn
Public service provision savings	£3.8bn	£5.0bn	£6.6bn
Total Benefits	£6.8bn	£8.2bn	£9.6bn
Costs			
Familiarisation costs	£0.0bn	£0.0bn	£0.0bn
Set-up costs	£0.0bn	£0.0bn	£0.0bn
Loss of tuition fee income ³⁵	-£2.6bn	-£3.9bn	-£5.5bn
Loss to exchequer	-£1.6bn	-£2.4bn	-£3.4bn
Loss of living expenditure	-£2.8bn	-£4.4bn	-£6.2bn
Total costs	-£7.0bn	-£10.8bn	-£15.1bn
Net Present Social Value (NPSV)	-£0.2bn	-£2.6bn	-£5.5bn

³⁵ HEIs and FECs combined.

89. Changes to baseline projections and the responsiveness of EU students to removing access to student loans and home fee status have a significant impact on the NPSV. Under the low scenario, the estimated quantified total benefits and costs are £6.8bn and £7.0bn respectively, thus resulting in an estimated NPSV of -£0.2bn (10-year PV, 2020/21 prices). Similarly, under the high scenario, the estimated total benefits and costs are £9.6bn and £15.1bn respectively, leading to an estimated NPSV of -£5.5bn (10-year PV, 2020/21 prices).

E8.2 Business Net Present Value (BNVP)

90. The Business Net Present Value (BNVP) measures the immediate net impact to business excluding the wider economic impacts of the policy change. It ranges from £430m (low scenario) to -£2,390m (high scenario) with a central estimate of -£800m (10-year PV, 2020/21 prices, central scenario) over the appraisal period.

91. The impacts included in the BNVP are loss of tuition fee income due to reduction in number of EU students, increase in tuition fee income from charging higher international fees and familiarisation and set-up costs. These are all impacts to HE and FE providers. The loss of living expenditure may also impact businesses as less money is spent in the economy by EU students, however, it has not been included in the BNVP calculation.

E8.3 Equivalent Annual Net Direct Cost to Business (EANDCB)

92. The EANDCB is -£140m for the central scenario, this is based on the following direct components.

- Familiarisation and set-up costs. Outlined in section E6.1 and E6.2. This approach uses readingsoft.com to estimate the length of time it takes to read the guidance and ASHE data is used to estimate the hourly cost of reading, which is applied to the total number of providers (and the relevant number of staff members at each provider).
- Removal of Home fee status. Outlined in Section E6.3 and E7.1. Removing home fee status directly impacts HEIs, as they can now charge EU students higher international fees. This will reduce the number of EU students, since England becomes a more expensive study destination. The loss of fee income from fewer EU students is more than offset by the additional fee income generated by charging higher prices. This is because demand is estimated to be inelastic.

93. As agreed with the Regulatory Policy Committee, the loss of tuition fee income associated with the reduction in EU student numbers from removing access to student loans is out of scope of the EANDCB. This is because i) financial assistance is excluded from the definition of a regulatory provision³⁶ and ii) the direct impact is on EU students not HE and FE providers.

E8.4 Small and Micro Business Assessment (SaMBA)

94. In the Higher and Further Education sector, provider size is normally based on its' student population, as it is considered more relevant for most policy questions than the total number of employees. It is possible for institutions with the same number of employees to have significantly different student populations, and therefore they may greatly vary in size. However, this small and micro business assessment will analyse provider size by the number of employees. Micro

³⁶ As stated in the Better Regulation Framework
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872342/better-regulation-guidance.pdf.

businesses generally have fewer than 10 employees, whilst small businesses are defined as those employing between 10 and 49 full-time equivalent (FTE) employees³⁷.

95. Our SaMBA evaluates the size of HE and FE providers that are regulated by the Office for Students (OfS) or Education Skills Funding Agency (ESFA). In AY 2018/19, 247 FECs submitted accounts data to the ESFA³⁸. As of November 2020, 412 HE providers were registered with the OfS³⁹. Some FECs may be registered with the ESFA and the OfS. In total, the two lists contain 490 English unique FE and HE providers. These 490 providers represents the estimated size of the regulated HE and FE sector.
96. Staff data is available for 382 out the 490 providers. Of the 247 FECs that submitted data to the ESFA only one FEC has fewer that 50 FTE staff. According to its accounts, this FEC received no income for EU or non-EU sources, and therefore should not be directly impacted by the policy changes measured in this IA.
97. Data for 2018/19 from HESA⁴⁰ suggests that there were around 306,000, staff members across 135 different HEIs, with an average of around 2,300 staff members per HEI⁴¹. In absolute terms, the smallest university (in terms of total employees) had 70 members of staff and this shows that HEIs fall outside of the scope of the SaMBA assessment.
98. Staff data is unavailable for 108 providers registered with the OfS. 75 of these providers are former Alternative Providers (APs)⁴² and 33 providers are “new” or “other” providers⁴³. Former APs were not previously required to submit data to the HESA staff record. New and other providers are have not been registered with the OfS long enough to have staff data published. Currently, only Approved (fee cap) providers are required to publish staff data. Of the 108 providers with no staff data, 44 belong to Approved (fee cap).
99. In 2018/19 the number of HE students on designated courses at the 75 former APs was 56,000, of which 2,800 where EU-domiciled. These APs tend to be smaller than HEIs, with 54 APs teaching fewer than 500 students. It is therefore, more likely that APs fall under the scope of the SaMBA. DfE finds that, though limited in number, it is possible that some providers registered with the OfS may be small enough to be considered small or medium businesses. This assessment is inferred from low students numbers rather than staff numbers, which are typically unavailable from smaller providers.
100. There may also be other small providers⁴⁴ that do not report to the ESFA or OfS who will be impacted by the policy changes. Evidence on the number of employees in Further Education colleges outside the ESFA is limited. The Further Education workforce data for England shows that there are a small number of independent, specialist and other colleges that have less than 50 FTE staff⁴⁵. However, it is unclear if these colleges would have an international focus, so may not be impacted by the policy changes. Similarly, an Independent HE survey⁴⁶ finds that 89% of its 82 respondents are small and medium business, however, some of these may be registered with the OfS, and the number of EU students at these providers is unknown.
101. Using the available data, DfE could only identify a limited number of small HE and FE providers that may or may not be impacted by the policy changes. Whether these providers should be in

³⁷ <https://www.gov.uk/government/publications/small-and-micro-business-assessment-samba-guidance>

³⁸ <https://www.gov.uk/guidance/esfa-financial-management-college-accounts>.

³⁹ <https://www.officeforstudents.org.uk/advice-and-guidance/the-register/the-ofs-register/> - The OfS register is continually updated.

⁴⁰ <https://www.hesa.ac.uk/data-and-analysis/staff>

⁴¹ HESA, 2018/19 <https://www.hesa.ac.uk/data-and-analysis/staff/table-1>

⁴² APs are defined here is providers that were previously designated for student support but not direct government funding.

⁴³ New providers are those that have only recently been established. Other are not new providers or APs.

⁴⁴ These could be small private FECs and APs that do not submit data to ESFA or HESA or teacher training schemes run by local authorities.

⁴⁵ <https://www.et-foundation.co.uk/wp-content/uploads/2020/06/SIR27-REPORT-FOR-PUBLICATION.pdf>

⁴⁶ <http://independenthe.com/our-work/the-independent-higher-education-survey-2/the-independent-he-survey-2019>

scope of this SaMBA is unclear due to limited data on staff and EU student numbers. The Department is committed to monitor and evaluate the impacts of the policy changes on small and medium businesses, which could involve improving data collection.

102. Given a reduction in EU students in the UK will also reduce living expenditure, it is possible small and micro businesses will be negatively impacted from reduced consumer demand. It is difficult to identify these businesses and quantify the impact, therefore they are out of scope of this SaMBA assessment. Overall DfE believe the majority of businesses impacted by this policy change will be large in size.

F. Proportionality

103. The analysis set out in this IA is based on changes to secondary legislation and builds on the HO's IA for changes to immigration rules for students.
104. The approach taken in this IA is considered proportionate to the proposed changes to student finance, as it quantifies the impacts of proposed changes, and the consequential impacts on student volumes, provider tuition fee income, the Exchequer and the wider economy.
105. It also shows where evidence is limited, or where assumptions have been made to conduct certain components of the analysis.

G. Risks and sensitivities

100. The following risks and sensitivities have been identified with the analysis presented in this IA.
- The analysis in this IA is highly uncertain and all estimates should be seen as indicative. Forecasting international student numbers is challenging due to their dependency on a wide range of uncertain, external factors.
 - This analysis does not attempt to quantify the behavioural response of universities and other providers to the policy changes. It does not estimate whether universities adjust their recruitment practices to mitigate any potential losses in EU students, due to lack of evidence. Sensitivity analysis is conducted in section G.2 to explore how this would impact the NPSV.
 - The decision for an EU student to come to the UK to study is a complex one, with several factors such as exchange rates, competition from other countries, economic growth, perceived welcomeness of the country. Changes to fees, finance and visas will likely deter EU students, which the evidence suggests, however, it is difficult to predict the overall impact on numbers. Given the uncertainty, this IA looks at the sensitivities underpinning the EU student behavioural assumptions (i.e. the elasticities used) in the low and high scenarios for calculating the NSPV.
 - This IA attributes the loss of EU student numbers to individual policy changes, it is more likely that students take a holistic look at England's offer weighing up multiple factors. This IA attempts to break up the loss and map to individual policy changes, DfE recognises the difficulties associated with this.

G.1 COVID-19 impacts

106. The analysis in this IA do not currently account for the impact of COVID-19, which could have a sizable impact on volumes (both EEA and non-EEA students), at least in the short term, but it is difficult to quantify the impact on international students coming to the UK as there are several factors that could affect this. These factors can include but not limited to (a) the number of cases in

a particular country (b) the easing of lockdown restrictions globally (c) whether UK universities choose to teach some of their courses virtually, or even delay the academic year (d) the perception of international students studying in the UK amidst the COVID-19 uncertainty and (e) the overall progression of the pandemic and availability of a vaccine.

107. The factors outlined above will consequently impact the projected tuition fee income of universities, however, it is too soon to accurately assess the size of this impact.

G.2 Behavioural response of universities

108. The previous analysis captures the behavioural response of students, however, does not account for the wider behavioural response of universities and other providers. It is possible they will adjust their recruitment practices to mitigate the potential reduction in EU student enrolments, such as recruiting more international students overall.
109. We consider the following three scenarios to illustrate the impact universities offering more places to non-EU students has on tuition fee income and the NPSV. It should be noted that it is uncertain whether universities will be able to attract the below level of non-EU students to offset some of the loss tuition fee income. International student enrolments are dependent on several external factors that are out of providers control, such as, the global economy and HE markets in other countries.
110. **Universities target recruitment to attract more non-EU students (to offset 10% of the reduction in EU students).** The analysis assumes universities do not replace the total fall in EU students with non-EU students. If universities chose to offer 10% of these places to non-EU students instead, this would generate around £0.4bn to £0.8bn in tuition fee income over the appraisal period (10-year PV, 2020/21 prices). This offsetting tuition fee income would increase the NPSV from between -£0.2bn and -£5.5bn to between £0.2bn and -£4.6bn (10-year PV, 2020/21 prices).
111. **Universities target recruitment to attract more non-EU students (to offset 25% of the reduction in EU students).** The next scenario assumes universities offer 25% of the total reduction in EU student enrolments to non-EU students. This would generate an additional £1.0bn to £2.2bn in tuition fee income over the appraisal period (10-year PV, 2020/21 prices). This offsetting tuition fee income would increase the NPSV to between £0.8bn and -£3.3bn (10-year PV, 2020/21 prices).
112. **Universities target recruitment to attract more non-EU students (to offset 50% of the reduction in EU students).** Finally, the analysis considers a scenario where universities offer half of the places from the reduction in EU student enrolments to non-EU students. This would generate an additional £1.9bn to £4.2bn in tuition fee income over the appraisal period (10-year PV, 2020/21 prices). This offsetting tuition fee income would increase the NPSV to between £1.7bn and -£1.3bn (10-year PV, 2020/21 prices).

H. Wider Impacts

113. The projected loss in EU student enrolments will impact the wider economy by reducing the talent pipeline for UK employers. After their studies, 3 out of 10 EU students currently⁴⁷ remain in the UK and the majority are high paid and employed skilled, technical, and professional occupations. EU students go on to become skilled graduates which is reflected in their higher wages; on average EU graduates that remain in the UK earn £30,300 per year five years after graduation, this is over

⁴⁷ This could change with change with the end of freedom of movement.

£3,000 more than their UK counterparts⁴⁸. A high proportion (43%) of EU students study science related subjects⁴⁹. STEM is an area identified by the Industrial Strategy as having a shortage of skills in the UK labour force. A reduction in EU students has the potential to increase this shortage, however, it should also be noted that a significant proportion of STEM graduates do not go into STEM occupations.

114. Because EU students who study in the UK are much more likely to take up PhDs in the UK than those which study abroad⁵⁰, the preferred option is expected to result in a decrease the number of new EU PhD students in the UK by 60% (central estimate) each year. At UK HEIs, a higher proportion of 4,000 annual PhD graduates⁵¹ from the EU go into research after completing their PhDs (64% vs 53% for those from the UK), meaning these EU PhDs are adding additional value to research. A significant loss of new researchers is expected annually from EU students who go from bachelors or masters courses directly to research jobs in the UK. Without any changes to recruitment behaviour, the preferred option is expected to result in a decrease of highly skilled researchers joining the UK workforce each year, with less quantifiable losses such as international lower circulation of researchers⁵². Research talent is a key component of the UK's aim to spend 2.4% of GDP on R&D by 2027⁵³.
115. The loss in EU students as a result of the policy changes will also potentially have a negative impact on England, and the UK's, soft power. Soft power increases the UK's influence abroad and international students are beneficial for soft power because, when they return to their home countries, future business, trade and diplomacy links can be advanced. Survey evidence⁵⁴ shows that international students gain a positive understanding of British values, and a perception of trust in British society and enterprises. In the Soft Power 30 index, the UK was ranked 3rd globally for education for 2019⁵⁵, the latest data available. Four out of the six education metrics for the index are related to HE, including the number of international students in the country, so changes in EU student numbers could negatively impact the UK's soft power.
116. Migration, and changes in migration flows, can also have impacts on communities. Community impacts include access to local housing, congestion, access to public services, environmental impacts, and crime.
117. As part of its report on the 'Impact of international students in the UK'⁵⁶, the MAC considered the impact of overseas students on the wider community, including health services, transport, and housing. The report noted whilst students may have some impact on the communities in which they live, hard evidence is difficult to find. The paper found that it is often difficult to separate the impacts of domestic and international students. There is no evidence to suggest that student neighbourhoods lead to a lower quality of life for other residents.
118. Whilst it is difficult to quantify the impact of students on local transport systems, the UCAS Student Lifestyle Survey found that generally⁵⁷, around 32 per cent of students walked to and around

⁴⁸ Department for Education, Graduate outcomes (LEO): 2017 to 2018 <https://www.gov.uk/government/statistics/graduate-outcomes-leo-2017-to-2018>

⁴⁹ HESA 2018/19. There is no agreed definition on what subjects are STEM. We have defined science related subject as: Medicine and dentistry, Subjects allied to medicine, Biological sciences, Physical science, Mathematical sciences, Computer science, Engineering and technology and Architecture, in line with HESA's definition.

⁵⁰ Sources HESA, [Eurostat](https://www.eurostat.ec.europa.eu/), internal calculations

⁵¹ 3,555 in 2018/19 Source: <https://www.hesa.ac.uk/data-and-analysis/students/outcomes>

⁵² This has been found to increase researcher productivity, accelerating the progress of science

⁵³ <https://publications.parliament.uk/pa/cm201719/cmselect/cmsctech/1453/145305.htm>

⁵⁴ BIS, The Wider Benefits of International Higher Education in the UK. September 2013. <https://dera.ioe.ac.uk/18261/1/13-1172-wider-benefits-of-international-higher-education-in-the-uk.pdf>

⁵⁵ The Soft Power 30 Index. <https://softpower30.com/country/united-kingdom/>

⁵⁶ Migration Advisory Committee, Impact of International Students in the UK. September 2018.

<https://www.gov.uk/government/publications/migration-advisory-committee-mac-report-international-students>

⁵⁷ <https://www.ucasmedia.com/sites/default/files/UCAS%20Media%20Student%20Lifestyle%20Report.pdf>

university, whilst a further 47 per cent use some form of public transport such as a bus, train or tube, and only a very small proportion of students drove to university. It is important to caveat that the survey covers all types of students, and therefore the results may differ for international students specifically. Assuming the behaviour of international students is the same as all students, this could suggest that they may have a limited impact on congestion.

119. Data from HESA in 2017/18 shows that around a quarter of international students tend to live in university accommodation, with a further 50 per cent of them living in private sector halls or rented accommodation. This differs from the behaviour of UK students, with around half of all UK domiciled students either living in their parental/guardian home or living in their own residence. The impact of international students on housing depends on a range of factors, such as the number of international students choosing to rent privately and the supply of housing in the particular area. The MAC report also noted that it is difficult to separate the impacts on housing made by domestic students and international students⁵⁸.
120. As there is limited evidence on the impact of international students on crime, it has assumed to be out of scope of the Justice Impact Test (JIT). There is also limited evidence on the impact of international students on the environment, and therefore it has assumed to be out of scope for the Environment Impact Test.

I. Trade Impacts

121. The policy changes outlined in this IA are estimated to have an impact on EU student migration flows to the UK, but there is limited evidence to suggest whether student migration specifically impacts trade. However, there is literature on the impacts of immigrants more generally on trade flows.
122. External literature finds a positive relationship between the stock of immigrants and trade. Gene et al. (2011)⁵⁹ provides a meta-analysis of 48 studies and finds, on average, a 10 per cent increase in immigration stock may increase the volume of trade in goods by about 1.5 per cent. This could be for a range of reasons, with Gould (1994)⁶⁰ arguing that immigrants have individual-specific knowledge of home-country markets which could enhance trading opportunities. For example, immigrants may have a greater knowledge of foreign languages which helps improve communication in trading relationships.
123. Given the temporary nature of student migration, it is unlikely that student migration specifically will directly impact trade flows during their time studying in the UK. However, international students may have an impact on trade if they choose to stay in the UK and work after graduation. The extent of this impact is likely to vary depending on how policy changes affect the stock of immigrants who work in the UK, which will impact trade.

J. Monitoring and Evaluation

124. The Government's preferred option is to remove access to home fee status and student finance under Option 1.
125. The Department will continue to monitor the number of EEA/Swiss and non-EEA/Swiss students at English Higher Education providers and the corresponding tuition fee income, mostly through the use of HESA and HO visa data. The Department will also monitor the impact these changes will

⁵⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739089/Impact_intl_students_report_published_v1_1.pdf

⁵⁹ Gene et al., (2011). 'The Impact of Immigration on International Trade: A Meta-Analysis.'

⁶⁰ Gould, (1994) 'Immigrant Links to the Home Country: Empirical Implications for U.S. Bilateral Trade Flows'

have on the wider economy through the Education Exports and Transnational Education Activity statistics⁶¹.

126. The Department will also monitor the impact of the policy on the UK's talent pipeline, especially the Research and Development workforce, including the number of PhD students from the EU, EEA, and Switzerland that study in the UK overtime. This will done using mostly HESA data on graduate outcomes⁶² and the Department's graduate outcomes data⁶³

⁶¹ <https://www.gov.uk/government/statistics/uk-revenue-from-education-related-exports-and-tne-activity-2017>

⁶² HESA, HE Graduate Outcomes Data <https://www.hesa.ac.uk/data-and-analysis/graduates>

⁶³ DfE, Graduate outcomes (LEO): postgraduate outcomes <https://explore-education-statistics.service.gov.uk/find-statistics/graduate-outcomes-leo-postgraduate-outcomes#dataBlock-5820a1fb-f73a-413d-a372-b59ad0645dbf-charts>

K. Annex

K.1 Introduction

127. This annex provides more information on the methodology and data sources behind the modelling used with the IA for the removal of home fee status and the access to student finance. The analysis described here is designed to give an indication of the potential scale of the economic impacts of the changes to the policies for EU students.
128. It begins by setting out the methodology behind the baseline projections of EU student enrolments, before calculating the average fees and loan take-up rates. Next it explains the methodology behind calculating the estimated policy impact on the flows. It then shows how the fiscal, economic and tuition fee impacts are estimated given the associated loss in EU student numbers.
129. There is considerable uncertainty within this modelling and there are several ways in which the uncertainty manifests itself:
 - a. Data sources - incomplete data means that it is not possible to appraise the full effects of the policy, although DfE believes the overall coverage is good (around 95% of all EU students).
 - b. Assumptions – any modelling requires the use of evidence-based assumptions and expert judgement and this IA is no exception.
 - c. Behavioural response and change – the Department believes there is a good evidence base but predicting responses and changes to behaviours can be highly uncertain.

K.2 Clusters

130. As mentioned previously, English HEIs are separated into four clusters for the analysis based on Boliver. Boliver (2015) classifies UK HEIs into four distinct clusters, based on differences in research activity; teaching quality; economic resources; academic selectivity; and socio-economic student mix.
131. Among the pre-1992 universities, Oxford and Cambridge 'emerge as an elite tier' (Cluster 1), with the remaining Russell Group universities essentially undifferentiated from the majority of other pre-1992 universities (Clusters 2 and 3). However, the cluster analysis indicates that there is a division among the post-1992 universities, with around a quarter of post-1992 universities forming a 'distinctive lower tier' (Cluster 4).
132. The analysis by Boliver provides a cluster classification for a total of 126 UK HEIs (out of a total of 170 institutions). London Economics ranked these HEIs by cluster (with Cluster 1 at the top) and mean entry tariff points and assigned clusters to an additional 37 institutions based on their mean tariff points or, if not available, based on the mean tariff points of similar institutions. They arrived at a clustering for 164 institutions UK HEIs which then used for the 169 English HEIs in the Department's analysis. For a full list see London Economics' publication⁶⁴.

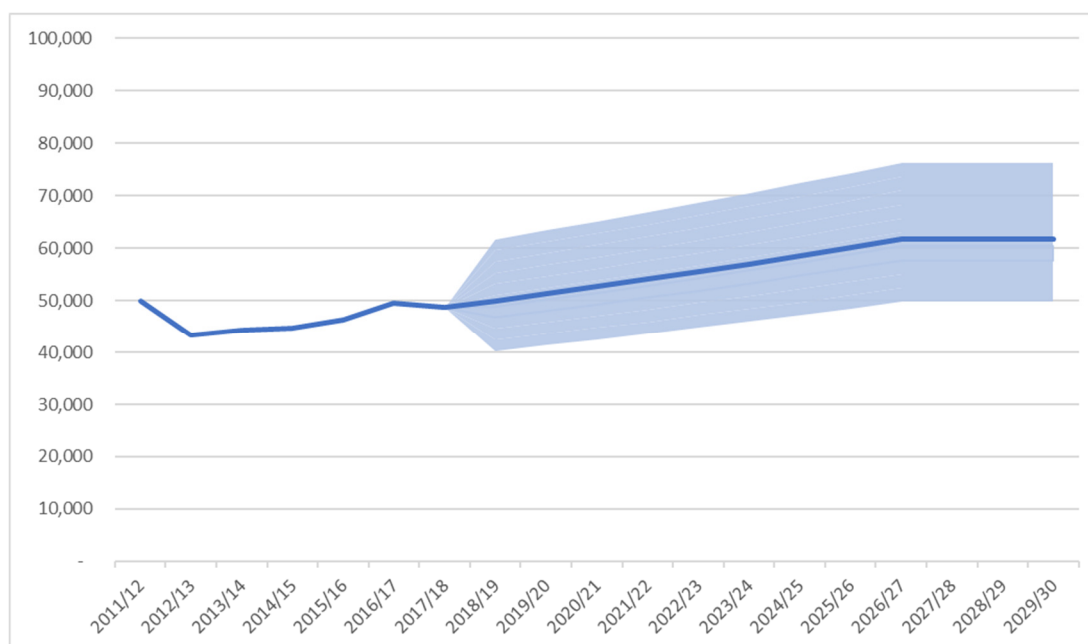
K.3 Student baseline modelling

133. The baseline projections for first-year EU student enrolments are based on historical trend data from Higher Education Statistics Agency (HESA) data between academic year 2000/01 and 2017/18.

⁶⁴ London Economics, February 2021, EU Exit: estimating the impact on UK higher education.

134. The historical period set out in the baseline projections was chosen to ensure the forecast trends were not distorted by recent years. The baseline projection is the same as used by HO to appraise their new points-based immigration system.
135. For this IA, the baseline is restricted to EU students at English HEIs. The baseline of EU students can be seen in Figure 4 below. EU student enrolments at English providers have increased by 49% between 2000/01 and 2017/18⁶⁵, and the baseline projections estimate that this will continue to gradually increase in the absence of any policy intervention. The analysis assumes a steady state beyond 2026/27 due to the uncertainty of projecting migration inflows.

Figure 4: Projection of EU student inflows at English HEIs between Academic Year 2011/12 to 2029/30



136. As with any form of economic modelling, uncertainty is present as there are a range of possible factors which can drive migration. The baseline projections for EU student enrolments should be treated as indicative, as historical trends are not always representative of future outcomes.
137. Coefficient of variation (CV) analysis is used in order to better capture this uncertainty. Total CV between 2000 and 2017 is conducted to estimate the historical volatility in EU student volumes, disaggregated by level of study. This is estimated to vary depending on the level of study but can be up to $\pm 25\%$ for EU students. The low and high projections in Figure 4 above are used to calculate the stock number of EU students underpinning the high and low NPSV figures in Table 5.

K.4 Student outflows

138. To estimate the total stock of international student migrants in HE, expected length of study estimates from HESA in 2017/18 are applied to the inflows of international students to HE. The expected length of study is defined as from the commencement of study (the first learning or teaching week) to the completion of the course, which normally includes time for examinations⁶⁶.

⁶⁵ HESA

⁶⁶ <https://www.hesa.ac.uk/collection/c17051/a/splength>

139. The analysis disaggregates this data by study level. Around 35 per cent of EU students come to study on courses in the UK which last less than a year, whilst around half of EU students come to study on courses which last between two and four years⁶⁷.
140. The analysis does not include non-continuation rates (that is, those who drop out of their courses), which may have an impact on outflows. However, the size of this impact is uncertain as there is no available data on non-continuation rates.
141. The expected length of stay is estimated to be the same under both the baseline and policy scenario.

K.5 Tuition fee prices

142. To calculate the average tuition fee price for home (UK and EU) and international students, the total fee income by cluster, domicile (UK, EU and non-EU) and level of study is divided by the Full Time Equivalent (FTE) student numbers. The latest student numbers and finance data at the time the analysis was conducted is used – AY 2018/19.
143. HESA publishes data on the total fee income by provider, domicile (UK, EU, non-EU) of student and level of study (undergraduate, postgraduate taught, and postgraduate research) for all UK HEIs. Whilst HESA does not publish FTE data, DfE has access to this which is also split by provider, domicile, and level of study. Home fees refer to UK and EU domiciled students and international fees refer to non-EU students.
144. The average fees used in this IA are shown in the table below. The average tuition fee for undergraduates is lower than the £9,250, which is to be expected. Previous analysis⁶⁸ has shown that almost all students are charged the £9,250 fee, however, some students may be eligible for bursaries. Also, some students are charged a reduced fee because they are on a sandwich year or mobility placement. There is a large difference between home and international fees for postgraduate (taught students), this is possibly because more scholarships are available to home students.

Table 6: Home and international tuition fees by cluster and level of study

Cluster	Level	Home fee	International fee
1	Undergraduate	£8,730	£22,600
2	Undergraduate	£8,710	£19,160
3	Undergraduate	£8,400	£15,250
4	Undergraduate	£8,500	£12,640
1	Postgraduate (taught)	£15,430	£34,740
2	Postgraduate (taught)	£9,720	£21,840
3	Postgraduate (taught)	£7,930	£16,680
4	Postgraduate (taught)	£6,370	£13,210
1	Postgraduate (research)	£6,380	£27,800
2	Postgraduate (research)	£2,380	£20,460
3	Postgraduate (research)	£3,260	£15,920
4	Postgraduate (research)	£4,000	£12,920

⁶⁷ Estimates here are rounded to the nearest 5 per cent.

⁶⁸

K.6 Loan take-up rates

145. The Department estimate the tuition loan take up rates for EU students to be 74% for undergraduates and 17% for postgraduates for 2018/19 (latest available data). These are derived by dividing the number of EU domiciled students taking up a tuition fee loan in English HEIs by the total number of EU domiciled students at those institutions. Only providers who have both SLC and HESA data available are included in this analysis.
146. This analysis assumes the loan take-up rates remain constant over the appraisal period and are the same for all clusters.

Table 7: Tuition fee loan take-up rates for EU domiciled students at English HEIs⁶⁹

Level of study	Number of EU students taking out a tuition fee loan	Total number of EU students	Loan take-up rate
Undergraduate	58,000	78,000	74%
Postgraduate	6,000	35,000	17%

K.7 Policy modelling

147. To estimate the impact of removing home fee status and access to student finance, the analysis takes the same approach as London Economics. Using elasticity estimates, average fees, loan take-up rates and RAB charges, the analysis makes the following calculations (see Table 8). The percentage reductions used are found in Columns I and J.
- Column A - % Loan Uptake. Calculated in Annex K.6.
 - Column B – RAB. Assume a 53% and 0% RAB for EU undergraduates and postgraduates, respectively.
 - Column C – Home fee. Calculated in Annex K.5.
 - Column D – Total RAB. If access to student finance is removed, EU students must now pay the RAB. The effective increase is equal to RAB multiplied by EU fee (Column B*Column C).
 - Column E – Non-EU fee. Calculated in Annex K.5.
 - Column F – Price elasticity. See Figures 1 and 3.
 - Column G – Loan Switch. See Figure 2. The same reduction is assumed for postgraduates.
 - Column H – Effective fee increase. Reduction in EU numbers given that students must pay RAB. Calculated by multiplying Column D and F.
 - Column I – Remove access to loans. Sum of loan switch and effective fee increase (Column G + Column H).
 - Column J. Remove Home fee status. The percentage increase in moving from EU to non-EU fees multiplied by the price elasticity. $(\text{Column E} / \text{Column C} - 1) * \text{Column F}$.
148. The low and high scenarios used to calculate the NPSV range assumed that EU students were 25% less and more sensitive to removing home fee status and access to student loans. To calculate these behavioural changes the analysis increases and decreases Column F and G by 25% and uses the adjusted Columns I and J.

⁶⁹ Figures rounded to the nearest 1,000.

Table 8: Policy change calculations – removing access to loans and home fee status

Cluster	Study level	% Loan uptake (A)	RAB (B)	EU fee (C)	Total RAB (D)	Non-EU fee (E)	Price elasticity (F)	Loan Switch (G)	Effective Fee Increase (H)	Remove access to loans (I)	Remove Home fee status (J)
1	Undergraduate	74%	53%	£8,725	£3,422	£22,603	-0.134	-6%	-9%	-13%	-21%
1	Postgraduate (taught)	17%	0%	£15,430	£0	£34,745	-0.108	-6%	0%	-1%	-14%
1	Postgraduate (research)	17%	0%	£6,382	£0	£21,191	-0.108	-6%	0%	-1%	-25%
2	Undergraduate	74%	53%	£8,710	£3,416	£19,155	-0.281	-12%	-18%	-27%	-34%
2	Postgraduate (taught)	17%	0%	£9,717	£0	£21,839	-0.210	-12%	0%	-2%	-26%
2	Postgraduate (research)	17%	0%	£2,377	£0	£15,153	-0.210	-12%	0%	-2%	-42%
3	Undergraduate	74%	53%	£8,401	£3,285	£15,245	-0.428	-17%	-28%	-40%	-35%
3	Postgraduate (taught)	17%	0%	£7,935	£0	£16,682	-0.312	-17%	0%	-3%	-34%
3	Postgraduate (research)	17%	0%	£3,260	£0	£11,015	-0.312	-17%	0%	-3%	-74%
4	Undergraduate	74%	53%	£8,497	£3,333	£12,637	-0.575	-23%	-37%	-54%	-28%
4	Postgraduate (taught)	17%	0%	£6,375	£0	£13,211	-0.414	-23%	0%	-4%	-44%
4	Postgraduate (research)	17%	0%	£4,004	£0	£11,790	-0.414	-23%	0%	-4%	-80%

K.8 Tuition fee income – modelling

149. The modelling uses HESA tuition fee data for 2018/19, disaggregated by level of study and cluster. To calculate the growth in baseline fee income over time the analysis multiplies the inflow of students by average tuition fees (see Table 8) to calculate the new tuition fee income and adds this to the previous year. Average tuition fees are also multiplied by the outflow of students to calculate the loss of fee income from students leaving, this is subtracted from the previous year.
150. The analysis also adjusts average fees by inflation. Consistent with the practice adopted by the Office for Budget Responsibility (OBR), the analysis assumes the tuition fee cap for undergraduates is fixed at £9,250 until 2023/24. From 2023/24 onwards, the model assumes that inflation-linked fee cap rises are in place and average undergraduate fees rise with RPIX. There are no caps on postgraduate fees and the model assumes average fees increase with inflation annually.

K.9 Fiscal Impacts

K9.1 Overview

151. A static analysis of the 2018/19 fiscal year is used to estimate tax revenue and government spending attributable to migrants of a given age, economic status and earned income. This analysis is applied to changes in future net student migration flows (by wage, age, and economic activity) to estimate the order of magnitude of the impact on the public finances. The underlying analysis follows the same approach as the HO IA.
152. This analysis is not a projection of the future state of the economy; it is based on the latest data on fiscal expenditure and tax rates which captures the UK economy in its current state, adjusting for productivity growth and inflation, allowing specific impacts of changes to migration to be explored, holding all other factors constant.
153. In the literature there are a number of different approaches to calculating the effect of policy changes on fiscal balances. The central methodology used here represents a 'marginal' approach to measuring the impact of migration and therefore makes a distinction between spend and revenue that is unlikely to vary according to the number of individuals moving to the UK.
154. The modelling framework considers initial impacts of specific policy changes. It does not consider dynamic responses of the economy and behavioural responses of individuals and education institutions. As such, fiscal impacts from a change in migration are presented over the short-term, defined as the first ten years of the policy (2021/22 to 2030/31). The approach considers the cumulative change in student migrant volumes over this period.
155. No assumption is made for how migrants age over this period. However, as the appraisal period is over a ten-year period, and fiscal spend unit costs are estimated in five-year age groups, this is expected to have a relatively small impact.

K9.2 Fiscal spend analysis

156. Data on expenditure on public services is obtained from Public Expenditure Statistical Analysis (PESA) published by HM Treasury, which provides data on public sector expenditure broken down

by functions. The analysis is based on data for 2018/19⁷⁰ it has been adjusted for productivity growth and inflation and is reported in real 2020/21 prices⁷¹.

Data

157. Public sector expenditure in PESA is broken down into the following functions:

- General public services
- Defence
- Public order and safety
- Economic affairs
- Environmental protection
- Housing and community amenities
- Health
- Recreation, culture, and religion
- Education
- Social protection
- EU transactions

158. Data on migrant population characteristics is obtained from the APS produced by the ONS. APS data for 2018/19 is used to derive population characteristics such as volumes of existing residents by nationality and age distribution. When using estimates of total UK population, the analysis uses ONS 2018 data⁷², which is considered more accurate than the APS.

Methodology

159. There are a number of different approaches to calculating fiscal impacts. The methodology attempts to represent a 'marginal' approach to measuring the impact of migration and therefore makes a distinction between costs that do not vary with additional individuals moving to the UK or extending their stay, and costs that do vary when one additional individual decides to move to the UK.

Treatment of public goods

160. Goods and services that do not vary with an additional individual are known as pure public goods and are defined as 'non-rival' and 'non-excludable'. This IA makes a further distinction between pure and congestible public goods or services. The classification of public goods and services as pure and congestible is uncertain and open to debate.
161. Pure public goods are non-rival and non-excludable, and the additional cost of providing such a good or service to an individual is considered to be zero. Non-rival means that the consumption of the good or service by one individual does not exhaust the opportunity for another person to consume the good or service. Non-excludable means that once the good or service is provided, it is impossible to prevent individuals from consuming it. An example of this being national defence.

⁷⁰

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/818399/CCS001_CCS07195_70952-001_PESA_ACCESSIBLE.pdf.

⁷¹ <https://www.gov.uk/government/statistics/qdp-deflators-at-market-prices-and-money-gdp-march-2020-budget>.

⁷² <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration>.

162. Congestible public goods are to some extent rival in consumption, but the additional cost of providing such goods and services is unknown and expected to be smaller than average costs. This category includes for example expenditure on transport and waste management. The definition and classification used in this IA is based on Dustman & Frattini 2014⁷³. This category includes for example expenditure on basic research, or on defence.

Treatment of all other public services

163. For those categories of expenditure where costs would change when one additional individual arrives or stays in the country, with costs shared equally across the population, public expenditure is apportioned to the total UK population to derive a unit cost estimate using ONS 2018 population estimates.

Treatment of public services: Health, Education and Social Services

164. In some cases, the consumption of public services is likely to vary by age, gender, family composition and other factors such as income and ethnicity. Migrants and the native population may therefore have different characteristics in relation to the consumption of public services.
165. In some cases, the consumption of public services is likely to vary by age, gender, family composition and other factors such as income and ethnicity. Migrants and the native population may therefore have different characteristics in relation to the consumption of public services.
166. Unit costs are calculated by apportioning PESA 2018/19 spend on education, health and social services by the proportion of each age group made up by non-EEA nationals. This uses APS 2018/19 data to identify the migrant population by migrant status such as worker, student or dependant.
167. For health estimates, unit costs are calculated based on OBR data⁷⁴ on the proportion of total health spend by age group, and this is weighted by the proportion of EU students in each age group. This is then applied to the PESA 2018/19 data. Unit costs for and pre-primary and primary education, and social services are calculated by apportioning the 2018/19 spend to EEA and non-EEA nationals in each age category. A unit cost is estimated by migrant status, which seeks to reflect the characteristics of the different segments of the population. The modelling assumes that international students and their dependants are ineligible for welfare payments whilst in the UK.
168. For tertiary spend, this is based on the average loan paid per EU full-time student based on Student Loans Company data⁷⁵. The Resource and Accounting Budget (RAB) charge is also applied to estimate the cost to the government of borrowing to support the student finance system too. The student loan take-up rate is then applied to estimate the number of students who take up the loan. Overall, the total public expenditure on student loans is an estimated £250m per annum, on average over the policy period. The analysis removes all student loan costs because we are removing access to student loans. The HO model scaled down the student loan cost by the fall in enrolments because they modelled a scenario where EU students still had access to student loans.

K9.3 Fiscal revenue analysis

169. The analysis uses a bottom-up approach to calculate the expected contribution to direct and indirect taxes from migrants, based on individuals' characteristics, and data on their earnings and

⁷³ <http://www.cream-migration.org/files/FiscalEJ.pdf>.

⁷⁴ <http://1budgetresponsibility.org.uk/fsr/fiscal-sustainability-analytical-ooers-july-2016>

⁷⁵ Table 38(i). Student Loans Company.

spending patterns. The results are then applied to the volume of EU students who are expected to come and study in the UK under the policy changes.

Data

170. The analysis considers information on indirect taxes as a proportion of disposable income by nationality in the Living Cost and Food survey (data between 2015/16 and 2017/18⁷⁶) and information on council tax in ONS data on the effects of taxes and benefits on household income⁷⁷ 2018/19. Some revenue streams (Corporation tax, business rates and other taxes) are based upon the OBR's Economic and Fiscal Outlook⁷⁸ and then apportioned based upon modelled migrant contributions to indirect taxes. Direct taxation contributions are based upon current tax rates being applied to the income distribution of working dependents of international students; students are assumed not to pay any Income tax.
171. The Student Income and Expenditure Survey⁷⁹ is used to estimate the total disposable income of part-time and full-time students, and this is weighted by HESA 2018-19 domicile data⁸⁰ to provide a unitary estimate of student expenditure data by domicile, which the indirect tax percentages are applied to.

Methodology

172. The analysis considers the fiscal contribution of a migrant through direct and indirect taxation. For direct taxation, the analysis applies income tax and National Insurance Contribution rates from 2020/21 to the estimated taxable income of the working dependants of international students.
173. Council tax is allocated depending on earning deciles, based on the ONS estimates of council tax paid per household in each income decile. However, full-time students are not required to pay council tax⁸¹, but if they share accommodation with an employed individual (such as a dependant) or a part-time student, the household is liable to only pay 75 per cent of the council tax bill. Therefore a 25 per cent discount to council tax is applied to working dependants in this analysis.
174. Indirect taxes include VAT, duties on specific products such as alcohol and tobacco, licences such as television and intermediate taxes. Indirect tax contributions will depend upon tastes, preferences and characteristics. The lack of robust data on the expenditure of migrants results in uncertainty about their spending patterns. Therefore, for indirect tax contributions the analysis applies a similar approach as taken for council tax. Indirect tax contribution estimates from the LCF survey are used to calculate the proportion of income spent on indirect tax for each earning decile, and these are applied to EU students to estimate total indirect tax revenue.
175. Profits and the capital stock change with the size of the workforce. In a marginal approach the assumption is made that any changes in migration will have an impact of company taxes and business rates. This assumes that contributions to company tax and business rates are ultimately driven by consumption in the same way as indirect taxes, and the per capita allocation is based on an individual's contribution to indirect taxes. The estimates of the fiscal contribution of migrants only include the direct and indirect tax contributions from student migrants and their dependants

⁷⁶ <https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/expenditure/adhocsl11L63householdexpenditureanddisposableincomebydisposableincomedecilegroupbyoriginofhouseholdreference:enceoer:soouklioacialeareending2016tofinanciafyareending2018>

⁷⁷ <https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/datasets/householddisposableincomeandinequality>

⁷⁸ <https://www.gov.uk/economic-and-fiscal-outlook-march-2020/>

⁷⁹ <https://www.gov.uk/government/publications/student-income-and-expenditure-survey-2014-to-2015>

⁸⁰ <https://www.hesa.ac.uk/data-and-analysis/students/where-from>

⁸¹ <https://www.gov.uk/council-tax/discounts-for-full-time-students>

themselves, and this analysis does not account for any impact that migrants have on the fiscal contribution of the resident population.

K.10 Living expenditure

176. Weekly living costs for EU domiciled students are estimated using the Student Income and Expenditure Survey for 2017/18⁸². The figures used are uplifted by inflation. The approach taken is the same as on DfE's publication "UK education related exports and transnational education activity, 2016"⁸³.
177. The calculation for average weekly living costs is £350. To proxy EU student spending the analysis uses the figure that excludes students who live with their parents. This has been done to better reflect the costs of international students.
178. The annual cost is calculated by multiplying the average weekly cost by the length of stay in England, this is assumed to be:
 - 39 weeks for EU undergraduates (it is assumed they will travel to their country of origin during the holidays)
 - 52 weeks for EU postgraduates (reflects longer course duration).
179. As per the standard approach, it is assumed that part-time and full-time students stay in England for the same amount of time.
180. To calculate total living expenditure, the analysis takes the split of undergraduate and postgraduate students from of baseline and policy forecasts (over the ten-year appraisal period). These numbers are then multiplied by the course length and weekly living cost, which are adjusted for inflation.
181. The weekly expenditure figures are gross of tax. To avoid double counting any fiscal revenue generated is subtracted from the expenditure.

⁸²

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/909414/Student_Income_and_Expenditure_Analysis.pdf.

⁸³ <https://www.gov.uk/government/statistics/uk-revenue-from-education-related-exports-and-tne-activity>.