Title: Updating the Immigration Health Surcharge, 2018 **IA No:** **HO0312** **RPC Reference No:** **N/A** **Lead department or agency:** Home Office **Other departments or agencies:** Department of Health and Social Care	**Impact Assessment (IA)** **Date: 3 July2018** **Stage: Final** **Source of intervention:** Domestic **Type of measure:** Secondary legislation **Contact for enquiries:** Borders, Immigration and Citizenship Policy, Home Office

Summary: Intervention and Options

RPC Opinion: N/A

Cost of Preferred (or more likely) Option				
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANDCB in 2014 prices)	**One-In, Three-Out** N/A	**Business Impact Target Status** N/A
£933.9m	£20.3m	N/A		

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

The Immigration Health Surcharge (the Surcharge) was implemented in 2015, ensuring that non-European Economic Area (non-EEA) migrants coming to the UK for more than 6 months make a fair contribution towards the cost of the NHS services available to them.

Following a review by the Department of Health and Social Care of the cost to the NHS of treating Surcharge payers, the Government intends to double the Surcharge. The increased rate of the Surcharge will better reflect the costs to the NHS of treating those who pay it, whilst remaining below cost recovery level, in keeping with the 'fair contribution policy'.

What are the policy objectives and the intended effects?

The policy objective is to increase the Surcharge so that it better reflects the actual costs to the NHS of treating those who pay it whilst continuing to represent a fair and proportionate contribution by migrants.

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

Option 0 – Do nothing: No changes are introduced and the Surcharge level remains at the current level.

Option 1 – Doubling the Immigration Health Surcharge: Surcharge liable non-EEA migrants would pay double the current annual rate of Surcharge; £400 each for temporary migrants and their dependants, a discounted rate of £300 each for students and their dependants as well as those on the Youth Mobility Scheme.

Option 1 is the Government's preferred option as it better meets the policy objective.

Will the policy be reviewed? The Surcharge level will be kept under review.

If applicable, set review date: N/A

Does implementation go beyond minimum EU requirements?	N/A			
Are any of these organisations in scope?	**Micro** Yes	**Small** Yes	**Medium** Yes	**Large** Yes
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 (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.

Signed by the responsible Minister: Caroline Nokes Date: 5th October 2018

Summary: Analysis & Evidence

Policy Option 1

Description: Full Implementation **- Doubling the Immigration Health Surcharge**

FULL ECONOMIC ASSESSMENT

Price Base Year 17/18	PV Base Year 18/19	Time Period Years 5 years	Net Benefit (Present Value (PV)) (£m)		
			Low: £861.0m	**High: £1,004.8m**	**Best Estimate: £933.9m**

COSTS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Cost** (Present Value)
Low (Elasticity)	£0.0m			**£0.00m**
High (Elasticity)	£0.0m			**£274.2m**
Best Estimate	£0.0m			**£131.1m**

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

The identified direct costs of Option 1 due to the Surcharge increase are:

1) Education sector: Lower tuition fee income, **£63.2m**
2) UK Exchequer: Lost tax contribution from reduction in migrants entering the UK, **£58.6m**.
3) Surcharge revenue: Lower revenue due to lower application volumes, **£4.9m**.
4) Home Office: Lower visa fee revenue due to lower application volumes, **£4.4m**.

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

The monetised cost of migrant spending modelled in this IA covers the proportion of spending that accrues to the Government. There may be wider indirect costs to businesses, that are not monetised but are considered qualitatively.

BENEFITS (£m)	**Total Transition** (Constant Price)	Years	**Average Annual** (excl. Transition) (Constant Price)	**Total Benefit** (Present Value)
Low (Elasticity)	£0.0m			**£1,004.8m**
High (Elasticity)	£0.0m			**£1,135.2m**
Best Estimate	£0.0m			**£1,064.9m**

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

The identified direct benefits of Option 1 due to the Surcharge increase are:

1) Surcharge revenue: Increased revenue from those who continue to migrate to or remain in the UK, including both standard and premium routes, **£984.9m** and **£20.0m** respectively.
2) UK Exchequer: Savings from lower public service provision, **£51.2m**.
3) UK native workers: Increased employment**, £7.7m.**
4) Home Office: Savings from processing fewer visa application, **£1.2m**.

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

Lower immigration to the UK may result in some wider benefits (improved social cohesion, reduced congestion in housing and transport costs). These impacts are not monetised and are expected to be small. Ensuring that migrants make a fair contribution to the cost of NHS services available to them will help increase public confidence in the immigration system.

Key assumptions/sensitivities/risks/uncertainties **Discount rate (%)** 3.5%

Baseline volumes for 2018/19 are based on Home Office internal planning assumptions as set out in Table 1 and 2. Volumes data used in this IA may not match actual outturns in future published statistics.
The impact of increases in the Surcharge on volumes is based on assumptions on price elasticity of demand for visas as set out in Annex 3. Elasticity effects are based on the change in the Surcharge against the expected income of the applicant over the expected duration of stay in the UK.
Exchequer effects are based on assumed income and direct and indirect tax contributions; unit costs of public service provision are estimated for migrants based on available evidence. The methodology used for the fiscal analysis is set out in Annex 4.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			**Score for Business Impact Target (qualifying provisions only) £m:**
Costs:	**Benefits:**	**Net:**	N/A

Evidence Base (for summary sheets)

A. Problem under consideration

The Immigration (Health Charge) Order 2015, made under section 38 of the Immigration Act 2014 and implemented in April 2015, requires that non-EEA temporary migrants who make an immigration application to come to the UK for more than 6 months, or who apply to extend their stay in the UK, make a direct contribution to the NHS via payment of an immigration health charge (often referred to as the immigration health surcharge or IHS).

Following a review by the Department of Health and Social Care of the cost to the NHS in England of treating those who pay the surcharge, where new analysis had placed the average cost to the NHS per surcharge-paying migrant at around £480[1] per year on average. A proposal to double the current surcharge level to £400 (£300 for students, their dependants and Youth Mobility Scheme applicants) was considered with other options. This would still be a lower level than equivalent charges on average in other comparable countries. It is below the manifesto commitment of tripling the IHS to £600, and remains below full cost recovery in line with the policy intent of ensuring non-EEA migrants make a 'fair contribution' towards the cost of the NHS services available to them. The Government intends to double the annual surcharge amount so that it better reflects the financial impact that surcharge-payers have on the range of NHS services available to them.

B. Rationale for intervention

The rationale for the introduction of the immigration health charge is set out in the impact assessment dated 28 January 2015 which was laid with the draft Immigration (Health Charge) Order 2015. It can be viewed here: http://www.legislation.gov.uk/ukdsi/2015/9780111128473/impacts.

Since implementation of the Immigration (Health Charge) Order 2015, non-EEA temporary migrants who make an immigration application to come to the UK for more than 6 months, or who apply to extend their stay in the UK, subject to certain exemptions, make a direct and proportionate contribution to the NHS via payment of an immigration health charge. Payment of the Surcharge is mandatory for those affected and failure to pay it, when required to do so, will mean that permission to enter or remain in the UK will not be granted. Exemptions from the requirement to pay the Surcharge are set out in Schedule 2 to the Immigration (Health Charge) Order 2015, as amended by the Immigration (Health Charge) (Amendment) Order 2016, and the Immigration (Health Charge) (Amendment) Order 2017 – these include exemptions for vulnerable groups including individuals who apply for asylum or humanitarian protection, victims of trafficking and modern slavery, and individuals who make an application under the Home Office policy known as the "Destitution Domestic Violence Concession".

The Surcharge is set at £200 per person per year for temporary migrants and their dependants, with a discounted rate of £150 per person per year for students and their dependants, and for Youth Mobility Scheme applicants. The Surcharge is collected as part of the immigration application process, and the total amount for the whole period of leave, is payable upfront and in full. The level of charge has not increased since it was introduced in April 2015.

Those who pay the Surcharge can access NHS services generally free of charge whilst their leave remains valid, subject to those charges UK residents must pay for, such as prescriptions and dental treatment in England. Since 21st August last year, those who pay the Surcharge are also subject to NHS charges for assisted conception services in England under the National Health Service (Charges to Overseas Visitors) (Amendment) Regulations 2017. Income from the Surcharge, minus an amount the Home Office retains to cover its costs, is distributed between the devolved health administrations for health spending purposes under the Barnett Formula. NHS

[1] Data in 2018/19 prices.

revenue for the UK from the Surcharge was £164 million in 2015/16, £204 million in 2016/17 and similar revenue to the latter is expected in 2017/18.

The Department of Health and Social Care (DHSC) has reviewed the cost to the NHS in England of treating those who pay the surcharge, and estimates that the NHS spends on average £480, per Surcharge payer per year[2].

DHSC looked at actual data on surcharge-payers who use the NHS and their length of stay in the UK between April 2015 and December 2017 inclusive, and estimated the NHS costs of treating the average IHS payer (with average length of stay in the UK). The estimated average primary, secondary care and some other services[3] cost across all IHS payers (including those who did not access health services) was around £480 per person per annum (an estimated £310 on secondary care and other services costs and £170 for primary care per person). The average cost to the NHS of those who used secondary care was around £1,300.

The Government intends to double the annual amount of the surcharge later this year to £400, per person, per year. Students, as well as those on the Youth Mobility Scheme, will continue to receive a discounted rate, which will be increased to £300. The increased rate of the Surcharge will better reflect the costs to the NHS of treating those who pay it, whilst remaining below cost recovery level. **It could raise approximately an additional £220 million per year for the NHS.**

C. Policy Objective

The policy objective is to increase the Surcharge so that it better reflects the actual costs to the NHS of treating those who pay it whilst continuing to represent a fair and proportionate contribution by migrants.

D. Options

Option 0: Do Nothing

Surcharge liable non-EEA migrants would continue to pay the Surcharge at the current annual rate; £200 each for temporary migrants and their dependants, a discounted rate of £150 each for students and their dependant as well as those on the Youth Mobility Scheme (YMS).

Option 1: Doubling of the IHS

Under option 1 Surcharge liable non-EEA migrants would pay double the current annual rate of Surcharge; £400 each for temporary migrants and their dependants, a discounted rate of £300 each for students and their dependant as well as those on the YMS.

E. Appraisal (Costs and Benefits)

General Assumptions & Data

Objective function

In line with previous Home Office analysis and following recommendations made by the Migration Advisory Committee (MAC)[4]; this IA considers the impact of the options on the welfare of the UK resident population. Besides the effect on government revenue and processing costs due to changes in the Surcharge level, the NPV calculation includes the effect of changes in contributions to direct and indirect taxes, the effect on consumption of public services, on tuition fees paid by

[2] The estimate is a weighted average across all Surcharge payers, including those who use and those who do not use the healthcare services.

[3] Other services include Ambulance, Public Health, and Directly Commissioned Specialised Services, and an average of Community, Mental Health, and Integrated Social Care services.

[4] MAC; “Analysis of the Impact of Migration”; January 2012. https://www.gov.uk/government/publications/analysis-of-the-impacts-of-migration

international students, and the effect on the labour market for the resident population where possible. Foregone migrant wages are not included in the NPV calculations in line with MAC recommendations, as the IA does not consider the impact on overall GDP.

Volumes

Future volume of applications for each Surcharge liable visa product is based on Home Office internal planning assumptions for 2018/19. These are Home Office internal estimates of expected applications in 2018/19, without accounting for the changes in visa fees introduced by the Fee Regulations 2018 or the doubling of the Surcharge level considered in this IA. These volumes are used as the baseline against which the impact of proposed changes in the Surcharge level is assessed. It should be noted analysis of some impacts considers volumes of granted applications, as it is changes in granted applications that drive the impact. These volumes are calculated by applying the estimated grant rates[5] to Home Office internal estimates of visa applications.

As the figures are based on Home Office internal estimates, they should be considered as indicative only due to the uncertainty around estimates of future visa applicants' behaviour. This IA assumes that volumes remain constant at the 2018/19 estimated level throughout the appraisal period of the policy.

Table 1 shows the estimated number of visa applications expected in 2018/19.

Table 1: Estimated visa application volumes for 2018/19.

Visa type	Baseline applications 2018/19 (planning assumption)
Out of Country	
PBS Tier 1	5,000
PBS Tier 2	76,000
PBS Tier 4	241,000
PBS Tier 5	44,000
Family	40,000
In Country	
PBS Tier 1	3,000
PBS Tier 2	26,000
PBS Tier 4	45,000
PBS Tier 5	2,000
Family	122,000

Source: Home Office internal analysis

Table 2 shows the estimated number of visa applications through premium service for 2018/19. This data is usually omitted from Home Office analysis on the impact of changes to visa fees as the service is optional for applicants. However, although the premium service is optional, the Surcharge is mandatory at a fixed rate on all eligible visa and therefore these volumes are considered in this impact assessment.

[5] Home office analysis based on: https://www.gov.uk/government/publications/immigration-statistics-april-to-june-2017/list-of-tables

Table 2: Estimated premium service visa application volumes for 2018/19.

Visa type	Baseline applications 2018/19 (planning assumption)
PSC Tier 1	1,000
PSC Tier 2	15,000
PSC Tier 4	7,000
PSC Tier 5	1,000

Source: Home Office internal analysis

Surcharge Level

This IA assesses the impact of increasing the Surcharge level as set out in Annex 1. The total amount that Surcharge payers are charged depends on their length of stay in the UK. The total amount Surcharge payers are liable for over the duration of their visa is paid upfront as part of the visa application, although unsuccessful applications receive a refund[6]. The analysis developed in this IA uses internal Home Office data on the average length of stay per visa category in 2016/17, and applies the costs associated with the Surcharge to granted applications.

Fee Levels

The Government has laid secondary legislation, the Immigration and Nationality (Fees) Regulations 2018[7], outlining visa fee levels to be implemented at the beginning of the financial year 2018/19. As the policy is scheduled to be implemented in April 2018, this IA applies the level of visa fees scheduled to be introduced in 2018/19 as proposed in the Regulations in its analysis of impacts. Annex 2 details the visa fee level for Surcharge eligible visa categories and also shows the most recent estimates of unit costs for each visa category.

Appraisal Period

The estimates presented in this IA assume that the Surcharge level and visa fee levels remain at these levels for the following years and the policy is appraised for the following five years, in line with standard appraisal practice. This should not however be interpreted as an indication of future Surcharge or visa fee levels beyond 2018/19, as visa fees will be set year on year in future Fee Regulations and the Surcharge level will be kept under review.

The Surcharge is expected to be implemented in autumn 2018. The IA assumes that the policy will be implemented in Q3 2018/19 and appraises it over a period of five years to Q2 2023/24. It should be noted that this may not reflect the exact implementation date.

With regards to student visa applicants (Tier 4 applicants), the IA assumes that the 2018/19 cohort applies for and is granted a Tier 4 visa before the beginning of the academic year in September 2018 and therefore the proposed Surcharge increase is not applied to this cohort. In line with this assumption, the IA assumes that the 2023/24 cohort of Tier 4 applicants incurs the Surcharge costs during the first two quarters of the year,

Price Elasticity of Demand for Visa

An increase in the Surcharge level could deter some potential migrants from applying to enter or remain in the UK. The increase in the Surcharge level could therefore have an impact on the number of visa applications received each year. While it is difficult to isolate the impact of any one particular factor driving visa demand, evidence from visa applications over the period following the introduction of the Surcharge in 2015 does not suggest any significant change in applications.

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[6] https://www.gov.uk/healthcare-immigration-application/refunds

[7] http://www.legislation.gov.uk/uksi/2018/330/impacts

The Home Office has developed a methodology to estimate the impact of changes in fees on application volumes. This methodology has been used for previous IA on the impact of changes in visa fees[8] and on the immigration health surcharge[9].The analysis treats the increase in Surcharge as an increase in the cost of moving to the UK and estimates the effect that this increase may have on volumes of visa applications by applying estimates of the responsiveness of demand for visa to changes in fees (price elasticity of demand for visa products).

Home Office internal research has not found any evidence of a statistically significant relationship between changes in visa fees and the volume of applications for visa products. Absence of evidence does not necessarily imply there is no relationship, and therefore in order to avoid the risk of underestimating the impact of the changes, the analysis uses estimates of price elasticity of demand available from the academic literature developed in similar contexts as proxies for the price elasticity of demand for visa. While this is considered to be a cautious approach when considering small increases in visa fees; the impact of substantial increases in fees (such as the doubling of the Surcharge) is more uncertain – this is considered in the Risks section below.

The range of elasticities identified for each visa category has been used to produce a range of the NPV impact of the policy. The central scenario uses the elasticity estimates based on the academic literature; the low scenario assumes no response to the price increase and therefore that volumes remain unaffected; the high scenario assumes the elasticity estimates are higher than the central scenario.

Annex 3 provides a summary of the available literature and elasticity estimates used in the analysis in the low, central and high scenarios. Most of these assumptions are in line with those made in the 2015 Regulating migrant access to health services in the UK IA.

E.1 Workers' visas (Supply of Labour)

The reduction in visa applications and therefore volumes of individuals entering or remaining in the UK for work-related reasons as a result of an increase in immigration costs has been estimated by applying estimates of the wage elasticity of labour supply, which measures the responsiveness of the supply of labour to changes in wages, to the expected earnings over the duration of the visa. An increase in immigration costs is treated as equivalent to a reduction in the expected earnings over the duration of the visa period. The central scenario assumes a small reduction in the willingness to supply labour as a result of changes in immigration costs, applying an elasticity of -0.5. The low scenario assumes a zero response to the change in wage and the high scenario uses an elasticity of -1.1. The wide range used as sensitivity reflects the available evidence and the uncertainty around the central estimates.

E.2 Family visa

For family visa, price sensitivity is assumed to be similar to that of migrants supplying labour in all scenarios as it is possible that applying for a family visa may be associated with work opportunities in the UK at a household level. However, evidence is limited and therefore these should be considered indicative assumptions. For example, while the central scenario assumes an elasticity of -0.5, it is possible that that the true elasticity for these applicants is closer to zero. Applicants to a family visa may have less flexibility in choosing whether to come or remain in the UK for a given change in the cost of immigration where the decision is based on family ties rather than economic grounds, particularly for in country applications. Therefore, it is important to note here that the elasticity of -0.5 may overstate the responsiveness of an applicant to a fee change. Section F.5 explores in further details the risks and sensitivity around the central estimates for family visa applications.

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[8] http://www.legislation.gov.uk/uksi/2016/177/impacts and http://www.legislation.gov.uk/uksi/2018/330/impacts

[9] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/251972/Health_impact_assessment.pdf

E.3 Dependants' visa

For out-of-country applicants, the elasticity estimates are assumed to be the same as for the main applicant to the visa. For in-country dependant applications, the central scenario assumes no price sensitivity of visa demand; this is to capture the fact that migrants who are already in the country with family members may be less sensitive to changes in immigration costs. The assumption is applied only on dependants and not on main applicants because the analysis does not separate main applicants with and without dependants. The high scenario assumes an elasticity of -0.5 based upon the central estimates for worker's visa, to reflect the chance that some applications could potentially be deterred.

For the two categories above (workers' visa; respective dependants' visa) the proposed increase in Surcharge level is applied to the expected earnings over the duration of the visa less the current Surcharge, giving the proportional reduction in expected earnings. The elasticity estimates are then applied to this proportional reduction and the baseline volumes, giving the estimated reduction in application volumes due to the increase in Surcharge level. Expected earnings are assumed to grow in line with the OBR's forecast for growth in wages and salaries over the appraisal period. Historic rates at which applications are granted are used to estimate the impact on grant volumes. For dependants, the elasticity is applied to the potential earnings of the main applicant over their expected duration of stay as the main applicant is expected to pay for the cost of the dependant's immigration.

E.4 Students' visas (Demand for Higher Education)

Demand for students' visa is driven by demand to access UK education. The reduction in applications to student's visa and therefore volumes of students entering the UK has been estimated using estimates of the price elasticity of demand for higher education, which measures the responsiveness of the demand for higher education due to changes in the cost of higher education. These estimates have been applied to the estimated overall costs of undertaking higher education in the UK. Estimates in the academic literature for the price elasticity of demand for higher education typically suggest a central estimate of around -0.5. Annex 3 provides further details on the sources.

The available evidence suggests that the number of international student entrants to UK higher education institutions has increased since 2008/09[10], though the trend for non-EU students has varied between different years, and overall numbers have been stable since 2014/15. There is also limited evidence on the responsiveness of international students to changes in visa fees specifically, although some evidence suggests that ease of obtaining visa to study ranks fairly high among the factors that influence international students' decisions[11]. Therefore, in the central scenario, it is assumed that a central elasticity estimate of -0.5 is associated to increases in student immigration costs, while the high scenario applies an elasticity of -1, and the low scenario applies an elasticity of zero.

E.5 Premium service visa

This analysis assumes no behavioural response by premium service applicants to increases in immigration costs, assuming a price elasticity of demand for premium services of 0 in all scenarios. The willingness to pay the additional costs associated with premium services is interpreted as a strong signal of applicants' intent to migrate to the UK. Thus, the IA assumes that these applicants are unlikely to be deterred from remaining in or migrating to the UK due to changes in immigration costs. Section E21 under Sensitivity Analysis considers however the effect of these users switching to the standard visa application route, rather than using premium services.

[10] https://www.hesa.ac.uk/data-and-analysis/students/where-from

[11] https://www.hobsons.com/res/Whitepapers/23_Beyond_The_Data_Influencing_International_Student_Decision_Making.pdf

Costs and Benefits

The first direct impact of changes in the Surcharge level and application of central elasticity assumptions is a reduction in visa applications and therefore visa granted. Most of the cost and benefits of the proposed policy arise as a consequence of the effect on volumes.

The following tables show the estimated effect of price elasticity of demand on visa applications and visa granted using central elasticity assumptions. As can be inferred from the tables, the proposed changes in the Surcharge level are expected to have relatively small impacts on visa applications and visa granted. This is largely because the cost of Surcharge is a relatively small proportion of the expected income of coming to or remaining in the UK for workers or the cost of education for students.

Table 3: Estimated reduction in visa applications and visa granted

		Baseline applications (planning assumption)	**Estimated change in applications / grants vs baseline**					
		2018/19	**2018/19***	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24***
Out of Country	PBS Tier 1	5,000	-10 / -	-10 / -10	-10 / -10	-10 / -10	-10 / -10	- / -
Out of Country	PBS Tier 2	76,000	-80 / -80	-160 / -160	-160 / -150	-150 / -150	-150 / -140	-70 / -70
Out of Country	PBS Tier 4	241,000	- / -	-600 / -570	-580 / -550	-560 / -530	-550 / -520	-530 / -510
Out of Country	PBS Tier 5	44,000	-130 / -120	-250 / -240	-240 / -230	-230 / -220	-230 / -210	-110 / -100
Out of Country	Family	40,000	-70 / -50	-140 / -90	-130 / -90	-130 / -90	-130 / -80	-60 / -40
In Country	PBS Tier 1	3,000	- / -	-10 / -10	-10 / -10	-10 / -10	-10 / -10	- / -
In Country	PBS Tier 2	26,000	-20 / -20	-50 / -40	-50 / -40	-40 / -40	-40 / -40	-20 / -20
In Country	PBS Tier 4	45,000	- / -	-120 / -110	-110 / -110	-110 / -110	-110 / -100	-100 / -100
In Country	PBS Tier 5	2,000	- / -	-10 / -10	-10 / -10	-10 / -10	-10 / -10	- / -
In Country	Family	122, 000	-150 / -80	-300 / -160	-290 / -150	-280 / -150	-270 / -140	-130 / -70

Source: Home Office Analysis. Rounding: Baseline volumes rounded to the nearest 1,000; other volumes rounded to the nearest 10.
* Includes estimates for two quarters of the year to capture implementation expected in Q3 2018/19.

Direct Costs

The main direct costs of changes in the Surcharge level are a consequence of the reduction in visa applications by Surcharge eligible applicants and therefore visa granted, due to the impact of the price elasticity of demand for visa assumptions. The value of costs and benefits described in the following paragraphs are based on central assumptions on price elasticity demand for visa.

E.6 Loss of Surcharge revenue

A reduction in visa applications would result in a loss of Surcharge revenue, due to a reduction in visa granted, on which Surcharge is paid, resulting from the reduction in visa applications. Under the central case, the **lost Surcharge revenue is estimated to be £4.9 million** (PV, 2017/18 prices) over the five-year appraisal period.

E.7 Loss of Home Office revenue

A reduction in visa applications would also result in a loss of Home Office revenue due to lost revenue from visa fees paid by applicants. Under the central case, the **lost revenue to the Home Office is estimated to be £4.4 million** (PV, 2017/18 prices) over the five-year appraisal period.

E.8 Loss in tuition fee income

In the central scenario, the analysis also assumes that visa applications by international students are also affected, resulting in a loss in tuition fee income for the education sector. Under the central case, the **lost tuition fee revenue is estimated to be £63.2 million** (PV, 2017/18 prices) over the five-year appraisal period. The IA assumes that tuition fees are paid by students evenly throughout the year, therefore the final year of the appraisal period accounts for half of the loss in tuition fees.

This result is highly uncertain as and likely to be a worst-case scenario. This is because the analysis does not make any assumption on the extent to which higher education institution may respond to a small reduction in applications by offering university places to other students, either from the UK, EEA or non-EEA countries. Therefore, the estimated loss may be mitigated by the replacement of deterred non-EEA students with other non-EEA, EEA or UK students - this is considered in more detail in section E.20 of the Sensitivity Analysis.

E.9 One-off implementation costs for the Home Office:

The Home Office will incur the additional cost of updating the visa application form and updating information available to prospective applicants around the new proposals. In addition, IT systems would need to be updated. **These costs are estimated to be minimal and therefore negligible.**

Indirect Costs

E.10 Loss to the Exchequer

A reduction in visa granted and therefore the number of migrants working and studying in the UK would result in a loss to the exchequer from fiscal contributions via direct and indirect taxes. Annex 4 provides further details on how estimates of fiscal contributions are derived. Under the central case, the **loss to the Exchequer is estimated to be £58.6 million** (PV, 2017/18 prices) over the five-year appraisal period.

Direct Benefits

E.11 Increase in Surcharge revenue

The increase in the Surcharge level is expected to generate an increase in Surcharge revenue. As the Surcharge is charged annually, this benefit is calculated as the change in Surcharge level times average visa length times the volume of granted applications. The **increase Surcharge revenue is estimated to be £984.9 million** (PV, 2017/18 prices) over the five-year appraisal period.

E.12 Increase in Surcharge revenue from premium services

The increase in the Surcharge level is expected to generate an increase Surcharge revenue from premium service users. As above, this benefit is calculated as the change in Surcharge level times average visa length times the volume of granted applications. The **increase Surcharge revenue is estimated to be £20.0 million** (PV, 2017/18 prices) over the five-year appraisal period.

E.13 Reduction in Home Office processing costs

A reduction in visa applications is expected to result in administrative savings to the Home Office, therefore reducing processing costs. The **saving to the Home Office is estimated to be £1.2 million** (PV, 2017/18 prices) over the five-year appraisal period. Unit costs of processing a visa application for 2017/18 are outlined in Annex 1. Unit costs are assumed to stay flat in nominal terms over the appraisal period as these costs are reviewed year-on-year and do not necessarily grow in line with inflation.

Indirect Benefits

E.14 Reduction in public expenditure

The reduction in the volume of migrants entering the UK or extending their visa, as a result of the elasticity effect on visa applications is expected to result in a reduction in public expenditure on public services as fewer people would use such services. The **savings in expenditure on public services are estimated to be £51.2 million** (PV, 2017/18 prices) over the five-year appraisal period. Results are calculated by applying the unit cost on expenditure for public services for different types of migrant groups to the expected reduction in grant volumes due to the elasticity effect. Annex 4 provides further details on the methodology and assumptions used to estimate public expenditure costs per head.

E.15 Employment opportunities for UK residents

The reduction in the volume of migrants entering the UK can have an impact also on the labour market by affecting the employment opportunities of UK residents where the migrants deterred from entering the country for employment reasons are replaced by UK residents. The Home Office makes the following assumptions about the impact of migration on the resident population:

- Native workers are not displaced by skilled migrants entering the country.
- For every 100 low skilled migrants entering the UK labour market, 15 native workers are expected to be displaced, although this effect is expected to dissipate over time and the displaced workers will be fully re-employed within 3 years.

These assumptions apply under normal economic conditions and during times of economic upturn and are based on a literature review of the impacts of migration on UK native employment published jointly by the Home Office and the Department for Business, Innovation and Skills[12]. The central scenario assumes that for every 100 low-skilled migrants deterred from entering the UK each year of the appraisal period, 15 additional UK workers enter employment. Skill levels are inferred from visa application category and while some element of the displacement effect is expected to last from one year to the next, it is expected to diminish over time, having dissipated completely within 3 years. This impact is monetised by applying the median wage of visa applicants to the number of applicants deterred from entering or remaining in the UK each year of the appraisal period. Annex 5 provides details on the findings regarding displacement effects and their application in this IA. The **benefit from increased employment opportunities to UK residents in the central case is estimated to be £7.7 million** (PV, 2017/18 prices) over the five-year appraisal period.

[12] Occasional Paper 109 *Impacts of migration on UK native employment: an analytical review of the evidence* available at: www.gov.uk/government/publications/impacts-of-migration-on-uk-native-employment-an-analytical-review-of-the-evidence

Summary of Results

The results for the central scenario are summarised in Table 4.

Table 4: Cost and benefits of preferred option under central assumptions

Present Values (2017/18 prices) £ million	2018/19*	2019/20	2020/21	2021/22	2022/23	2023/2024*	NPV
Benefits							
Revenue raised from IHS changes	£62.3m	£208.6m	£201.6m	£194.8m	£188.2m	£129.3m	£984.9m
Revenue raised from IHS changes (premium service visa)	£1.6m	£4.3m	£4.2m	£4.1m	£3.9m	£1.9m	£20.0m
Saving to UKBA from processing fewer visa applications	£0.1m	£0.3m	£0.3m	£0.2m	£0.2m	£0.2m	£1.2m
Savings to UK due to lower public service provision	£0.9m	£7.9m	£11.9m	£12.9m	£12.4m	£5.1m	£51.2m
Increased employment opportunities for UK residents	£0.3m	£1.2m	£1.6m	£1.7m	£1.6m	£1.3m	£7.7m
Total benefits (PV)	**£65.2m**	**£222.3m**	**£219.6m**	**£213.7m**	**£206.3m**	**£137.8m**	**£1,064.9m**
Costs							
Loss of IHS revenue from fewer granted applications as a result of the IHS change	-£0.3m	-£1.1m	-£1.0m	-£0.9m	-£0.9m	-£0.6m	-£4.9m
Exchequer loss from reduction in migrants coming to and remaining in the UK	-£1.4m	-£9.0m	-£13.2m	-£14.6m	-£14.6m	-£5.9m	-£58.6m
Loss of visa fee revenue from fewer applications as a result of the IHS change	-£0.4m	-£1.0m	-£0.9m	-£0.8m	-£0.8m	-£0.5m	-£4.4m
Loss of Premium service visa fee revenue as a result of the IHS change	-	-	-	-	-	-	-
Lower tuition fee income	-	-£8.9m	-£15.4m	-£16.4m	-£15.4m	-£7.2m	-£63.2m
Total costs (PV)	**-£2.1m**	**-£19.9m**	**-£30.5m**	**-£32.7m**	**-£31.6m**	**-£14.2m**	**-£131.1m**
Net benefit (PV)	**£63.1m**	**£202.4m**	**£189.0m**	**£181.0m**	**£174.7m**	**£123.6m**	**£933.9m**

Source: Home Office internal analysis
* Includes estimates for two quarters of the year to capture implementation expected in Q3 2018/19.

Under central assumptions the estimated total costs and total benefits are £131.1 million and £1,064.9 million respectively, resulting in an estimated NPV of £933.9 million (5 year PV, 2017/18 prices).

Changes to the assumptions on price elasticity of demand for a visa, keeping all other assumption constant, produces a range around the NPV result for the central case of £861.0 million to £1,004.8 million (5 year PV, 2017/18 prices).

Under the low elasticity scenario, where applicants do not have any behavioural response to the Surcharge level increases, the NPV of the policy increases to £1,004.8 million over the five-year appraisal period. An increase of £70.9 million compared to the central case. Under the high scenario, where applicants have a stronger behavioural response to the increase in the Surcharge level, compared to the central scenario, the NPV the policy reduces to £861.0 million. A decrease of £872.9 million compared to the central case.

Table 5 summarises the impact of changes in elasticity assumptions on the NPV of the policy, broken down by cost and benefit.

Table 5: NPV range under different elasticity assumptions

Present Values – Five-year appraisal period (2017/18 prices) Price elasticity of visa demand assumptions	High elasticity / Low NPV	Central NPV	Low elasticity / High NPV
Benefits			
Revenue raised from IHS changes	£984.9m	£984.9m	£984.9m
Revenue raised from IHS changes (premium service visa)	£20.0m	£20.0m	£20.0m
Saving to UKBA from processing fewer visa applications	£2.7m	£1.2m	-
Savings to UK due to lower public service provision	£110.7m	£51.2m	-
Increased employment opportunities for UK residents	£16.9m	£7.7m	-
Total benefits (PV)	**£1,135.2m**	**£1,064.9m**	**£1,004.8m**
Costs			
Loss of IHS revenue from fewer granted applications as a result of the IHS change	-£10.5m	-£4.9m	-
Exchequer loss from reduction in migrants coming to and remaining in the UK	-£127.4m	-£58.6m	-
Loss of visa fee revenue from fewer applications as a result of the IHS change	-£9.9m	-£4.4m	-
Loss of Premium service visa fee revenue as a result of the IHS change	-	-	-
Lower tuition fee income	-£126.4m	-£63.2m	-
Total costs (PV)	**-£274.2m**	**-£131.1m**	**-**
Net impact (PV)	**£861.0m**	**£933.9m**	**£1,004.8m**

Source: Home Office internal analysis. Figures may not sum exactly due to rounding.

In Country Transfers

The IA measures the economic costs and benefits of changes in the Surcharge level to the UK economy and UK residents.

E.16 Immigration Skills Charge

As a consequence of the increase in the Surcharge level there is expected to be a small reduction in the number of Tier 2 visa applications, a number of which fall within the scope of the Immigration Skill Charge (ISC). The ISC was implemented in April 2017 as part of a package of wider Government reforms to Tier 2 and is designed to ensure that employers invest in skills training for the domestic workforce. The obligation to pay the ISC sits with the migrant's sponsor, an employer operating in the UK. The ISC is collected by the Home Office as part of the visa sponsorship process and the income is transferred by the Home Office to the Consolidated Fund, less an amount to cover collection and administrative costs. The population percentages underlying the Barnett formula are used by HM Treasury to determine the split of funding between the Department for Education and each of the Devolved Administrations.

The reduction in the ISC payable by UK operating employers is regarded as a transfer payment between UK employers and HMG; this is because the reduction in ISC payable represents a decrease in revenue for HMG and a saving to UK operating employers. Transfer payments may change income or wealth distribution of the resident population, but do not give rise to direct economic costs and benefits, thus they are not counted in the NPV of the option considered. Keeping all assumptions at their central scenario level, the estimated saving to employers and therefore fall in HMG revenue associated with the increase in the Surcharge is expected to be negligible.

E.17 Third party payment processing costs

The Surcharge is collected via a third-party private company who charge a percentage of the value of Surcharge income handled. The Surcharge increase is expected to result in an increase in the volume of Surcharge revenue collected on which a fee is levied, this is expected to **cost the Home Office an additional £20.3 million (5 year PV, 2017/18 prices) and result in an equivalent increase in revenue for the private company contracted to collect the Surcharge from eligible migrants.** This is deemed to be a transfer between the Home Office and a UK based business.

As considered for the Immigration Skill Charge, transfer payments may change income or wealth distribution of the resident population, but do not give rise to direct economic costs and benefits, thus they are not counted in the NPV of the option considered.

Sensitivity Analysis

This IA further builds on results for the central scenario to present sensitivity analysis. Fee levels and other assumptions are varied while holding all others constant, allowing the assessment of the impact that different assumptions have on the results in the central scenario.

E.18 Public Service Provision

This IA uses various estimates of the value of average public service consumption by migrants. The difference between the low and high scenario is the inclusion of pure public goods and welfare costs in the estimate, while the central case does not include pure public goods it does include half of the estimated welfare cost reflecting that migrants may not be eligible to receive welfare payments.

Keeping all other assumptions at their 'central scenario' level:

- **Assuming public spending is at the 'Low' level, the NPV of the option falls to £901.6 million** (5 year PV, 2017/18 prices). This sensitivity result implies that the Government saves less from the migrants that are deterred from entering or remaining in the UK. This saving reduces from £51.2 million in the central case to £18.9 million (5 year PV, 2017/18 prices) if the low assumptions are used.

- **Assuming public spending is at the 'High' level, the net impact of surcharge changes increases to £961.2 million** (5 year PV, 2017/18 prices). This sensitivity result implies that the Government saves more from the migrants that are deterred from entering or remaining in the UK. This saving increases from £51.2 million in the central case to £78.4 million (5 year PV, 2017/18 prices) if high assumptions are used.

The difference in NPV between these two public spending levels is relatively small in magnitude compared to the NPV of the policy. This can be attributed to the Surcharge level increase having a relatively small effect on the volumes of migrants that are deterred from entering or remaining in the UK, to whom public service costs are applied.

E.19 Replacement

The proposed fee level in the central scenario is expected to have a small decrease in the volumes of granted applications for the subset of migrants to whom the displacement assumption is applied. Thus, **varying the level of the displacement assumption between 'Low' and 'High' gives a narrow range of £930.5 million to £946.1 million for the net impact of the Surcharge level changes** (5 year PV, 2017/18 base).

E.20 Student Replacement

The response of UK educational institutions to the estimated reduction in Tier 4 migration is unknown. The extent to which the impact of a reduction in Tier 4 migration can be effectively mitigated likely depends on the volume of excess demand from Non-EEA, EEA and native UK applicants for places at UK educational institutions. Comprehensive cover of data regarding the volume of Non-EEA applicants and applicants to postgraduate study is absent from UCAS data as typically they apply directly to the institution. This makes an estimation of the volume of excess demand a significant challenge and such analysis would be disproportionate to the impacts considered within this IA.

Consequently, analysis presented in this IA models a worst-case scenario where the deterred applications result in vacant places at UK institutions and none of these places vacated by deterred non-EEA migrants are filled either by another non-EEA, EEA or native UK applicants. In the case where there is excess demand and deterred applicants are replaced by other the impact of the proposed policy on tuition fee revenue would be reduced. The magnitude of such a reduction would be determined the characteristics of those individuals (for example, what tuition fee they pay depending on their status as UK/EEA or non-EEA) and the replacement rate.

E.21 Premium services substitution

The analysis in this IA assumes that the price elasticity of demand for premium services is zero; the sensitivity analysis presented here considers the impact on the NPV of the proposed policy if migrants using premium services do have a behavioural response to increased immigration costs.

Using a premium service signals that a migrant has high motivation to remain in or migrate to the UK. A sensitivity scenario is considered where those using premium services would mitigate the higher costs of migration due to the higher Surcharge cost by moving to the standard route rather than being deterred from applying. Holding all other assumptions as per the 'central' scenario, **assuming that all premium service applicants move to the standard channel, results in a reduction in the NPV of the proposed policy to £864.8 million** (5 year PV, 2017/18 base). This is a result of premium service applicants switching to the standard route where they would no longer pay the supplementary premium fee of £610, which results in a loss of revenue to the Home Office.

Small and Micro Business Assessment

The analysis presented in this IA does not analyse the composition of the cohort of migrants deterred from migrating to or remaining in the UK beyond the type of visa applied for. Consequently, the type of employers that deterred migrants could have been employed by is unknown. As the volume of migrants deterred from migrating to or remaining in the UK is small relative to the total volumes it is not expected there will be a large impact on business. In addition, since the Tier 2 system requires sponsorship, a relatively complex process, it may be more likely that large businesses act as employers. Therefore, small and micro businesses may be less likely to be effected by the change in Surcharge level.

F. Risks

F.1 Adverse Selection

Under the appraised option, there is a risk of adverse selection. By increasing the Surcharge there is a risk that the probability of attracting migrants who are more likely to require healthcare services increases. This could result in higher NHS expenditure on those migrants not deterred from entering or remaining in the UK.

F.2 Perverse Incentives

The high increase in Surcharge may create an incentive for migrants who pay the Surcharge to use the NHS more than they would otherwise do, if they felt that they would get better value for money by consuming an increased quantity of healthcare. This would result in higher NHS spend.

F.3 Upfront Payment

Within the Surcharge modelling, the elasticity assumption is applied to the estimated income of a migrant over the duration of the visa or in the case of students on the tuition fee liability plus living costs over the duration of the visa. Elasticity estimates are used to estimate the volume of migrants deterred from coming to or remaining in the UK. However, the Surcharge liability of a migrant over the course of their visa is payable in full prior to entry. Due to differences in timing between when Surcharge and visa fees are payable and when expected future income is redeemed it is possible that these fees are paid for with accumulated savings. Therefore, while migration may have a positive NPV to a migrant over the duration of the visa the upfront nature of costs may make it unaffordable.

Due to heterogeneity within the incoming migrant population (for example, country of origin, profession, home currency etc.) and ambiguity as to the extent to which employers may contribute to or mitigate these costs, the Home Office does not attempt to estimate the affordability of fees. It should therefore be considered that the impact on visa applications and granted visa applications of the proposed policy indicated by this modelling approach may fail to capture this. Subsequently the estimated NPV of the policy should be treated as indicative and subject to uncertainty.

F.4 Elasticity Assumptions

The application of elasticities in this IA has not been tested in relation to visa fees or the scale of price increases analysed in this IA and is unlikely to reflect the real-world elasticity in the specific circumstances considered, but it is believed that these represent the best available proxy measures. Given the risks posed by using these proxies, break-even analysis has been considered to estimate the percentage decrease in applications across all visa categories that would result in the modelled NPV of the policy over the five-year appraisal period being zero.

With all assumptions, excluding elasticity, held as under the central scenario, applications would have to fall by 3.4 per cent to result in the modelled NPV of the proposed policy being zero. This result includes all visa categories, and equates to the price elasticity of visa demand of the various visa products being approximately between 2 and 9. If students are excluded from the break even analysis, applications would have to drop by 14.7 per cent in order for the NPV of the policy to drop to zero, this equates to the elasticities of the visa categories to be approximately between 10 and 40. In both cases, the implied elasticities are significantly higher than the proxy elasticities used in the analysis.

F.5 Family visa fee waiver

Individuals making in country applications or extensions of their family visa may find a substantial increase in the Surcharge unaffordable and therefore apply for a waiver of their visa fee on destitution grounds. Therefore, the increase in the Surcharge level may result in an increase in destitution waiver applications. Should this result in an increase in the cases where visa fees are waived, the expected increase in Surcharge revenue may be lower than estimated. Revenue from the visa fee would also reduce. Also, being granted a visa fee waiver provides applicants with access to the NHS free of charge and removes the restriction on applicants' ability to access public funds. An increase in cases where visa fees are waived would therefore result in lower revenue for the Home Office from the Surcharge and visa fee, and higher costs to Government from providing public services and support.

It is considered that only a proportion of the in-country family visa applications may be eligible for visa fee waiver on destitution grounds. The Government is also considering options to mitigate the consequence an increase in Surcharge may have for applicants' affordability.

G. Enforcement

This policy does not introduce any new enforcement powers. The Surcharge will continue to be paid on application, before permission to enter or remain in the UK is granted. Failure to pay the Surcharge will result in an application being refused. Where a migrant seeking NHS care is found to be in the UK legally, but who has not paid the Surcharge (and is not otherwise exempt from doing so), the relevant NHS trust will remain responsible for recovering any treatment costs as appropriate. NHS trusts will inform the Home Office of any chargeable migrant (for example, one who has not paid the surcharge) that has failed to pay treatment charges of £1,000 or more. The Home Office will, under existing powers, refuse any further immigration applications from that migrant until the debt is repaid.

Where the migrant is found to be in the UK illegally, Home Office Immigration Enforcement officers will take appropriate action as part of existing operational procedures.

H. Summary and Recommendations

The table below outlines the costs and benefits of the proposed policy in the central scenario. The governments preferred option is option 1 as it better meets its policy objectives.

Table 6: Cost and benefits of proposed policy

Option	Present Values – Five-year appraisal period (2017/18 prices)		
	Benefit	Cost	NPV
1	£1,064.9m	£131.1m	£933.9m

Source: Home Office internal analysis

The business net present value (BNPV) of the proposed policy reflects an increase in revenue for the private company contracted to collect the Surcharge from eligible migrants and is estimated to be £20.3 million (5 Year PV, 2017/18 prices). It should be noted that the proposed policy is not associated with a monetised cost to business.

I. Implementation

The Government made an announcement to increase the Surcharge in February 2018. The policy is expected to be implemented during autumn 2018, following the introduction of secondary legislation.

J. Monitoring and Evaluation

The impact of the increase will be monitored by the Home Office, with support, as appropriate, from the Department of Health and Social Care and the devolved health ministries.

K. Feedback

The Home Office will continue to work closely with the Department of Health and Social Care and will engage with other Government departments as required. The Home Office will maintain open lines of communication with migrants via a dedicated email address, and may also receive feedback as part of its normal visa issuing processes, through its public enquiry lines, and through formal correspondence with interested parties.

ANNEX 1 – Proposed Surcharge Level

Table A1.1 – Out of country Surcharge level by visa products, £.

OUT OF COUNTRY - Visa Products	Current Surcharge per 6 months	Proposed Surcharge per 6 months
Family route to settlement	£100	£200
Tier 1 – Entrepreneur, standard – Main	£100	£200
Tier 1 – Entrepreneur, standard –Dependant	£100	£200
Tier 1 – Investor, standard – Main	£100	£200
Tier 1 – Investor, standard – Dependant	£100	£200
Tier 1 - Exceptional Talent Postal - Main	£100	£200
Tier 1 - Exceptional Talent Postal - Deps	£100	£200
Tier 1 Graduate Entrepreneur Route - Main & Dependants	£100	£200
Tier 1 - General- Dependants	£100	£200
Tier 2 General, ICT – Long-Term Staff, Sport & MOR – main applicant	£100	£200
Tier 2 General, ICT – Long-Term Staff, Sport & MOR – dependants	£100	£200
Tier 2 General, ICT over 3 years EC – Long term staff – main applicant	£100	£200
Tier 2 General, ICT over 3 years EC – Long term staff – dependants	£100	£200
Tier 2 – Shortage Occupations: Up to 3 years EC – main applicant	£100	£200
Tier 2 – Shortage Occupations: Up to 3 years EC – dependants	£100	£200
Tier 2 – Shortage Occupations: over 3 years EC – main applicant	£100	£200
Tier 2 – Shortage Occupations: over 3 years EC – dependants	£100	£200
Tier 4 - Main Apps	£75	£150
Tier 4 - Dependants	£75	£150
Short Term Student <12 Months Visa	£75	£150
Tier 5 Temp Work	£100	£200
Tier 5 YM	£75	£150
Tier 5 Dependants	£100	£200

Source: Home Office internal analysis

Table A1.2 – In country Surcharge level by visa products, £.

IN COUNTRY - Visa Products	Current Surcharge per 6 months	Proposed Surcharge per 6 months
LTR Non Student Postal Main	£100	£200
LTR Non Student Postal Deps	£100	£200
Employment LTR outside PBS Postal - Main	£100	£200
Employment LTR outside PBS Postal - Dependants	£100	£200
Tier 1 – Entrepreneur, standard – Main	£100	£200
Tier 1 – Entrepreneur, standard –Dependant	£100	£200
Tier 1 – Investor, standard – Main	£100	£200
Tier 1 – Investor, standard – Dependant	£100	£200
Tier 1 - Exceptional Talent Postal - Main	£100	£200
Tier 1 - Exceptional Talent Postal - Deps	£100	£200
Tier 1 - Graduate Entrepreneur Postal - Main	£100	£200
Tier 1 - Graduate Entrepreneur Postal - Deps	£100	£200
Tier 2 - Sport & MOR (In-UK) - main applicant	£100	£200
Tier 2 - Sport & MOR (In-UK) - dependants	£100	£200
Tier 2 - General (In-UK) - main applicant	£100	£200
Tier 2 - General (In-UK) - dependants	£100	£200
Tier 2 - ICT (In-UK) - main applicant	£100	£200
Tier 2 - ICT (In-UK) - dependants	£100	£200
Tier 2 General, ICT over 3 years leave to remain – Long-Term Staff – main applicant	£100	£200
Tier 2 General, ICT over 3 years leave to remain – Long-Term Staff – dependants	£100	£200
Tier 2 – Shortage Occupations: Up to 3 years leave to remain – main applicant	£100	£200
Tier 2 – Shortage Occupations: Up to 3 years leave to remain – dependants	£100	£200
Tier 2 – Shortage Occupations: Over 3 years leave to remain – main applicant	£100	£200
Tier 2 – Shortage Occupations: Over 3 years leave to remain – dependants	£100	£200
Tier 4 - Postal Main	£75	£150
Tier 4 - Postal Deps	£75	£150
Tier 5 - Postal Main	£100	£200
Tier 5 - Postal Deps	£100	£200

Source: Home Office internal analysis

ANNEX 2 – Visa fee, Fee Regulations 2018

Table A2.1 – Out of country Surcharge liable visa products, £.

OUT OF COUNTRY - Visa Products	Estimated 2018/19 Unit Cost	2018/19 Fee
Family route to settlement	£388	£1,523
Tier 1 – Entrepreneur, standard – Main	£185	£1,021
Tier 1 – Entrepreneur, standard –Dependant	£185	£1,021
Tier 1 – Investor, standard – Main	£185	£1,623
Tier 1 – Investor, standard – Dependant	£185	£1,623
Tier 1 - Exceptional Talent Postal - Main	£185	£608
Tier 1 - Exceptional Talent Postal - Deps	£185	£608
Tier 1 Graduate Entrepreneur Route - Main & Dependants	£185	£363
Tier 1 - General- Dependants	£185	£1,021
Tier 2 General, ICT – Long-Term Staff, Sport & MOR – main applicant	£128	£610
Tier 2 General, ICT – Long-Term Staff, Sport & MOR – dependants	£128	£610
Tier 2 General, ICT over 3 years EC – Long term staff – main applicant	£128	£1,220
Tier 2 General, ICT over 3 years EC – Long term staff – dependants	£128	£1,220
Tier 2 – Shortage Occupations: Up to 3 years EC – main applicant	£128	£464
Tier 2 – Shortage Occupations: Up to 3 years EC – dependants	£128	£464
Tier 2 – Shortage Occupations: over 3 years EC – main applicant	£128	£928
Tier 2 – Shortage Occupations: over 3 years EC – dependants	£128	£928
Tier 4 - Main Apps	£154	£348
Tier 4 - Dependants	£154	£348
Short Term Student <12 Months Visa	£130	£186
Tier 5 Temp Work	£116	£244
Tier 5 YM	£116	£244
Tier 5 Dependants	£116	£244

Source: Home Office internal analysis

Table A2.2 – In country Surcharge liable visa products, £.

IN COUNTRY - Visa Products	Estimated 2018/19 Unit Cost	2018/19 Fee
LTR Non Student Postal Main	£142	£1,033
LTR Non Student Postal Deps	£142	£1,033
Employment LTR outside PBS Postal - Main	£142	£1,033
Employment LTR outside PBS Postal - Dependants	£142	£1,033
Tier 1 – Entrepreneur, standard – Main	£126	£1,277
Tier 1 – Entrepreneur, standard –Dependant	£126	£1,277
Tier 1 – Investor, standard – Main	£126	£1,623
Tier 1 – Investor, standard – Dependant	£126	£1,623
Tier 1 - Exceptional Talent Postal - Main	£126	£608
Tier 1 - Exceptional Talent Postal - Deps	£126	£608
Tier 1 - Graduate Entrepreneur Postal - Main	£126	£493
Tier 1 - Graduate Entrepreneur Postal - Deps	£126	£493
Tier 2 - Sport & MOR (In-UK) - main applicant	£318	£704
Tier 2 - Sport & MOR (In-UK) - dependants	£318	£704
Tier 2 - General (In-UK) - main applicant	£318	£704
Tier 2 - General (In-UK) - dependants	£318	£704
Tier 2 - ICT (In-UK) - main applicant	£318	£704
Tier 2 - ICT (In-UK) - dependants	£318	£704
Tier 2 General, ICT over 3 years leave to remain – Long-Term Staff – main applicant	£318	£1,408
Tier 2 General, ICT over 3 years leave to remain – Long-Term Staff – dependants	£318	£1,408
Tier 2 – Shortage Occupations: Up to 3 years leave to remain – main applicant	£318	£464
Tier 2 – Shortage Occupations: Up to 3 years leave to remain – dependants	£318	£464
Tier 2 – Shortage Occupations: Over 3 years leave to remain – main applicant	£318	£928
Tier 2 – Shortage Occupations: Over 3 years leave to remain – dependants	£318	£928
Tier 4 - Postal Main	£252	£475
Tier 4 - Postal Deps	£252	£475
Tier 5 - Postal Main	£318	£244
Tier 5 - Postal Deps	£318	£244

Source: Home Office internal analysis

ANNEX 3 – Elasticity Assumptions

The following tables set out the elasticities used to analyse the impact of the changes in fees on different types of products. The following tables set out the academic papers from which these elasticities are taken. Elasticities used for dependent applications are not included in Table A3.1 as these were not derived from academic literature; rather, they were derived from Home Office analysis on the likely response by dependents from changes to dependent fees. Such responses were deemed to yield a best case and central elasticity of zero, and a worst-case value of -0.5.

The term 'elasticity' measures the responsiveness of demand for a product after a change in a product's own price. The elasticity assumption used here should be interpreted as the proportional decrease in visa applications (the demand) for a 1 per cent decrease in expected income over the total duration of the visa due to the increase in visa fee (the price). For example, if the increase in visa fee represents a 2 per cent decrease in total expected income and elasticity is assumed to be -0.5, then volumes would reduce by -0.5 x 2 per cent = -1 per cent.

Table A3.1 Elasticities used to analyse the impact of changing fees

Elasticity	Justification	Products	Magnitude		
			Low	Central	High
Wage elasticity of labour supply	Migrants demand Home Office products in order to supply labour in the UK. The wage elasticity of labour supply is thus used to estimate the impact on volumes of the proposed fee changes. e.g. an increase in fee is a reduction in expected wage, so should reduce labour supply.	*Tier 1* visa, in-country, extensions; *Tier 2 General* visa, in-country, extensions; *Tier 2 SOC/ICT/Sports/MOR* visa, in-country, extensions; *Tier 5* Youth Mobility and Temporary Worker visa, in-country, extensions; associated out of country dependants	0	-0.5	-1.1
Wage elasticity of labour supply (dependants)	For in-country dependant applications, the central scenario assumes no price sensitivity of visa demand as applicants are already in the UK with their family member (the main migrant), but in the high scenario assumes sensitivity akin to that of workers in the central scenario	In-country dependants	0	0	-0.5
Wage elasticity of labour demand	Firms demand Home Office products in order to bring migrants to the UK to fill employment vacancies. The wage elasticity of labour demand is thus used to estimate the impact on volumes of the proposed fee changes for sponsorship.	Sponsor Action Plan; Tiers 2, 4 and 5 Certificates of Sponsorship; Sponsor Licences	0	-0.75	-1
Price elasticity of demand for higher education	Migrant students demand Home Office student products in order to purchase education in the UK. Price elasticity of demand for higher education is used as a proxy for migrant price elasticity of demand for all types of education accessed through Tier 4.	Tier 4 visa, in-country, extensions, Confirmations of Acceptance for Studies (CAS)	0	-0.5	-1

Table A3.2 Empirical studies of the wage elasticity of labour supply

Source	Estimate of wage elasticity of labour supply*	Measure
R. E Lucas and L. A. Rapping, "Real Wages, Employment and Inflation", *Journal of Political Economy*, 77 (1969).	Short run: 1.12 – 1.13 (95% significance) Long-run: -0.07 – 0.58	Change in real wages on labour supply using US data 1929-1965
Y. Chang and S. Kim, "On the aggregate labour supply", *Federal Reserve Bank of Richmond Economic Quarterly Volume 91/1 Winter 2005.*	1.0	Aggregate labour supply elasticity
L. Osberg and S. Phipps, "Labour Supply with Quantity Constraints: Estimates from a Large Sample of Canadian Workers", *Oxford Economic Papers, New Series, Vol. 45, No. 2. (Apr., 1993), pp. 269-291.*	Between +0.1 and -0.1	Wage elasticity of labour supply in the Canadian Labour Market
P. Bingley and G. Lanot, *"The Incidence of Income Tax on Wages and Labour Supply", National Centre for Register-based Research (NCRR), Version 5.002 31 October 2000*	-0.4	Elasticity of labour supply in the Danish Labour Market

*Note that the estimated wage elasticity of labour supply includes negative values indicating a backward sloping or backward bending labour supply curve. This is due to the income effect outweighing the substitution effect. For a higher wage, individuals can decrease labour supply and enjoy the same level of consumption.

Table A3.3 Empirical studies of the price elasticity of demand for education

Source	Estimate of price elasticity of demand	Measure
The Determinants of International Demand for UK Higher Education, London Economics, Jan 2017	Undergraduate Study: -0.55 (-0.33 in the 1st year and -0.22 in the second year) Postgraduate Study: -0.21 (-0.21 in the first year and no statistically significant lagged effect)	The relationship between the number of first-year non-UK domiciled student enrolments and key macroeconomics determinants. One of which was UK tuition fees yielding the price elasticity of overseas demand for UK higher education
Tuition Elasticity of the Demand for Higher Education among Current Students: A Pricing Model Glenn A. Bryan; Thomas W. Whipple The Journal of Higher Education, Vol. 66, No. 5. (Sep. - Oct., 1995), pp. 560-574.	Between -0.12 to -0.3	Elasticity of demand for HE in a small private liberal arts college in Ohio, from increases in tuition fees between $6000 to $8000
Campbell, R. and B. Siegel. "The Demand for Higher Education in the United States, 1919-1964." American Economic Review, (June, 1967), pp. 482-94.	-0.44	Aggregate demand for attendance in 4-year institutions in the US from 1927 – 63
Hight, J. "The Supply and Demand of Higher Education in the U.S.: The Public and Private Institutions Compared." Paper presented to the Econometric Society, December, 1970.	Between -1.058 and -0.6414	Used Campbell and Siegel's data and split up for public and private sectors
Hoenack, S., W. Weiler, and C. Orvis. "Cost-Related Tuition Policies and University Enrolments." mimeo., Management Information Division, University of Minnesota, 1973.	Between -1.811 to -.837	Private demand for the University of Minnesota, using longitudinal data from 1948-72.

Table A3.4 Empirical studies of the wage elasticity of labour demand

Source	Estimate of wage elasticity of demand	Measure
The relationship between employment and wages. HMT, January 1985	Between -0.1 and -0.5	Econometric studies reviewed: elasticity of labour demand to changes in the real wage
David Metcalf (2004), "The impact of the National Minimum Wage on the Pay Distribution, Employment and Training," The Economic Journal, 114, March, C84-86.	-0.3	Elasticity of demand for labour in the first 5 years following introduction of the NMW in the UK.
Taeil Kim and Lowell Taylor (1995), "The employment effect in retail trade of California's 1988 minimum wage increase."	Between -0.7 and -0.9	Elasticity of demand for labour in California's retail trade.

ANNEX 4 – Fiscal Impact of migration

Changes in the volume of migrants coming to live in the UK can be analysed also in terms of their fiscal impacts, by considering the fiscal revenue that one additional migrant contributes to in the economy and the portion of government spending on public services that s/he consumes. The Home Office has developed modelling to assess the fiscal impact of migration on fiscal spend and fiscal revenue.

- Fiscal spend is estimated by calculating costs per head for different types of public services accessible by non-UK nationals who come and live in the UK.

- Fiscal revenue considers the contributions to tax revenue, such as income tax, National Insurance, council tax, indirect tax etc.

The following sections outline in more details the methodology used for the two components of the analysis.

4.1 Fiscal spend analysis

The analysis is largely based on the same methodology used for the IA for the Fee Order 2016[13] although it has been reviewed and updated where relevant. The analysis uses a top down approach to apportion total expenditure on public services at the individual level and derive unit costs per migrant status. The unit costs are then applied to the volume of applicants deterred from applying for a visa due to the price elasticity of demand for visa effect, and ultimately estimate the saving in public expenditure due to fewer people using public services.

Data

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 2015/16[14] up rated with inflation and reported in 2017/18 prices[15]. Public sector expenditure in PESA is broken down into the following functions:

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

Data on migrant population characteristics is obtained from the Annual Population Survey (APS) produced by the Office for National Statistics. APS data for 2015/16 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 2015[16] data which is considered more accurate than APS.

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[13] See Annex 6 at http://www.legislation.gov.uk/uksi/2016/177/impacts

[14] See Chapter 5 at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/539465/PESA_2016_Publication.pdf

[15] Inflation assumptions based on GDP deflator December 2017. https://www.gov.uk/government/statistics/gdp-deflators-at-market-prices-and-money-gdp-december-2017-quarterly-national-accounts

[16] https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesanalysistool

Methodology

There are a number of different approaches to calculating fiscal impacts. The methodology used here tries 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 vary when one additional individual moves to the UK.

The fiscal impacts included here are also those attributable from migrants – any transfers between for example between UK companies and the Exchequer are excluded, according to Green Book guidance and MAC recommendations on appraisal of migration policies.

Treatment of public goods

Goods and services that do not vary with an additional individual are known as public goods and are defined as 'non-rival' and 'non-excludable'. Non-rival means that the consumption of the good or service by one individual does not exhaust consumption of the same good or service by other individuals, for example once someone has walked through a park other people can still do the same. Non-excludable means that once the good or service is provided it is impossible to prevent individuals from consuming it, for example once street lighting is provided it is impossible to prevent individuals walking past to benefit from the light provided, regardless of whether they have contributed or not to the provision of the good or service.

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, the definition and classification used in this IA is based on Dustman & Frattini 2014[17]. Pure public goods are non-rival and non-excludable, and the additional cost of providing such goods or services to an individual is considered to be zero. This category includes for example expenditure on basic research, or on defence. 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 or waste management.

Based on the Dustman and Frattini 2014 classification of pure and congestible public goods, the Home Office has estimated the unit cost per person of such goods and services using PESA 2015/16 data for public expenditure divided by total population estimates. Data on total population estimates in this case has been based on ONS total population estimates for 2015[18]. Table A4.1 shows the results. While, at least in the short term, expenditure on pure public goods is not expected to vary with additional individuals, expenditure on congestible public goods is more likely to vary.

For the scenario analysis, the central and low scenario include only the unit cost for congestible public goods, to reflect the fact that these costs are more likely to vary in the short term with one additional individual. The high scenario includes estimates of both pure and congestible public good and services to reflect the fact that over time, a large increase in the population due to migration may as well lead to an increase in expenditure on these goods and services.

Table A4.1 Public good and services estimates, 2017/18 prices, £.

Public good and services estimates	(2017/18 prices)
Pure	1,500
Congestible	1,500

Source: Home Office analysis using PESA 2015/16 and APS 2015/16 data. Data uprated with inflation. Figures are rounded to the nearest 100.

17 http://www.cream-migration.org/files/FiscalEJ.pdf

18 https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesanalysistool

Treatment of all other public services

For those categories of expenditure where costs would change when one additional individual moves or stays in the country, but costs are considered to be shared equally across the population, public expenditure is apportioned to the total UK population to derive one single unit cost using ONS 2015 total population estimates. Examples include public expenditure on policy or housing development. Home Office estimates of unit costs for these public services is estimated at £500 per head in 2017/18 prices.

Treatment of public services: Health, Education and Social Services

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, the migrants and the native population are not necessarily likely to exhibit identical patterns for all the categories of public service consumption.

APS 2015/16 data shows that around 60 per cent of non-EEA nationals living in the UK are aged between 20 and 44, compared to 30 per cent of UK nationals. Following a similar approach to the one used in the 2016 Fee Order IA[19], this analysis estimates public service expenditure on health, education and social services by migrant status, adjusting for the age distribution of the migrant group.

Unit costs are calculated by apportioning PESA 2015/16 spend on education, health and social services to the proportion of non-EEA nationals by age group using APS 2015/16 data to identify the migrant population by migrant status such as worker, student or dependant.

For health estimates, unit costs are calculated based on OBR data on the proportion of total health spend by age group[20] and then by weighting unit costs by the proportion of non-EEA nationals in each age group by migrant status. It is important to note that the estimates used in the central and high scenario only adjust for the age distribution of the non-EEA population, and do not make any further adjustments. For example, no adjustment is made in the central and high scenario for use of service, which can be different between migrants and the native population. A further reduction of 40 per cent has been made to health unit costs in the low scenario, to reflect Department of Health internal analysis on lower use of service of the migrant population compared to UK population[21].

For education and social services, unit costs are calculated by apportioning PESA 2015/16 spend to the proportion of non-EEA nationals by age categories, and then by calculating a unit cost by migrant status reflecting the non-EEA population in such group. Note that no education costs are assigned to workers and students. Non-EEA workers are by definition in the UK for employment reasons and therefore no spend on education services is apportioned to them, non-EEA students pay tuition fees set at a higher level than for UK and EEA students, and these are assumed to cover for the cost of their studies.

The estimates used for education, health and social services unit costs are summarised in the Table A4.2 below.

[19] The methodology used in the 2016 Fee Order impact assessment was based on work by the National Institute for Economic and Social research 2011, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/257236/impact-of-migration.pdf

[20] OBR 2016; http://budgetresponsibility.org.uk/fsr/fiscal-sustainability-analytical-papers-july-2016/

[21] Department of Health estimate on use of service is based on data on use of primary and secondary care by immigration health surcharge payers. The unit cost calculated in this analysis however covers wider types of services using PESA 2015/16 data on spend on Medical Services and Central and other health services.

Table A4.2 Education, health and social services unit costs, 2017/18 prices, £.

Health, Education, Social Services (2017/18 prices), £	Central and High Scenarios (£)	Low Scenario (£)
All migrants	2,900	2,300
All non-EEA migrants	2,700	2,100
Non-EEA More than 5 years	2,600	1,900
Non-EEA Less than 5 years	3,000	2,300
Non-EEA Economic migrant	1,800	1,200
Non-EEA Student	1,300	800
Non-EEA Dependant	1,700	1,200

The estimates are based on age distribution of non-EEA migrants using APS data by nationality and not by country of birth; they do not therefore include those long-term migrants who have obtained British nationality as they are considered part of the resident population. The age distribution used in the analysis is therefore more skewed towards younger and working age individuals.

Treatment of public services: Welfare

Individuals subject to visa requirements are not eligible to access the welfare system for the first five years they live in the UK[22]. As the appraisal period of the analysis covers five years, welfare costs are only applied in the high scenario as sensitivity, as it is unlikely that the majority of migrants considered in the analysis is eligible for welfare payment.

The central scenario assigns half of welfare expenditure to all migrant categories, except for those who have been in the country for less than five years[23]. This is to reflect the fact that the visa categories considered cover both new applicants and extensions and therefore it is possible that those who extend their visa may have been in the country long enough to be eligible for welfare payments.

The estimate used for welfare costs per person is based on PESA 2015/16 expenditure, weighted to reflect the working-age and pension-age splits of non-EEA nationals using APS 2015/16 data. The Home Office estimates this cost to be £2,500 per person in 2017/18 prices (2015/16 data has been uprated with inflation). It is important to note that this only takes into account the age distribution of the non-EEA population, and does not make any further adjustments. For example, there is no adjustment on the take-up of benefits by non-EEA nationals which may be different between migrants and the native population.

The estimate is also based on age distribution of non-EEA migrants using APS data by nationality and not by country of birth; it does not therefore include those long-term migrants who have obtained British nationality as they are considered part of the resident population. The age distribution used in the analysis is therefore more skewed towards younger and working age individuals.

[22] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/639597/analysis-of-migrants-access-to-income-related-benefits.pdf

[23] In the absence of further evidence on the migrants' use of the welfare system over time, 50% of estimated welfare expenditure has been selected as an indicative assumptions, and it may not accurately reflect reality.

Results

In summary, the impact assessment makes the following assumptions in the low, central and high scenarios, as set out in Table A4.3.

Table A4.3 Summary assumptions used in the IA, 2017/18 prices, £.

Unit cost	2017/18 prices £	Scenario		
		Low	Central	High
Pure public good	1,500	-	-	Included
Congestible public good	1,500	-	Included	Included
Other public services	500	Included	Included	Included
Health, Education, Social Services	Varies	Included	Included	Included
Welfare	2,500	-	Included (half)	Included (full)

Table A4.4 shows the total unit cost used by migrant status in each scenario.

Table A4.4 Total unit cost used by migrant status in each scenario, 2017/18 prices, £.

Category (2017/18 prices)	Low	Central	High
All migrants	2,800	6,100	8,900
All non-EEA migrants	2,600	5,900	8,700
Migrant in last 10 years	2,400	5,800	8,600
Migrant in last 5 years	2,800	5,000	6,500
Economic migrant	1,700	5,000	7,800
Student	1,300	4,500	7,300
Dependant	1,700	4,900	7,700

4. 2 Fiscal revenue analysis

The analysis on fiscal revenue is also largely based on the same methodology used in the Fees Order 2016 impact assessment, although, just like the analyses on fiscal spend, it has been reviewed and updated where relevant. The model uses a bottom up approach to calculate the expected contribution to direct and indirect taxes from visa applicants. The results are applied to the volume of visa applicants deterred from applying due to the price elasticity effect on visa demand, as a consequence of the increase in visa fees. This allows calculating the total tax revenue forgone due to fewer migrants moving to the UK or extending their stay.

Data

The analysis applies tax rates for direct taxes and assumptions on spend on indirect taxes to estimated income and spending associated with applicants to different visa categories.

The analysis used the following data on income and spending for different visa categories:

- **Nationality and settlement:** Gross incomes for applicants and dependants have been based upon estimates of the median wage of non-EEA nationals multiplied by the employment rate for this group. The data come from the Labour Force Survey (LFS) 2017 Q2.
- **Tier 1 Investor:** The fiscal contributions are inferred from the indirect taxation on their spending in the UK. The indirect tax estimates used are based upon research by the Migration Advisory Committee (MAC) on the economic impact of Tier 1 investors[24].
- **Other Tier 1 routes (Entrepreneur; Graduate entrepreneur; Exceptional talent):** In the absence of Home Office management information for the salaries of Tier 1 migrants, the gross incomes are assumed to be in line with the median salaries of self-employed individuals in the UK, based upon analysis of the Family Resources Survey by the Institute for Fiscal Studies, uprated to account for average earnings inflation[25].
- **Tier 2 and Tier 5:** Gross incomes have been obtained from 2016 and 2017 Home Office management information. Tier 5 salaries are calculated as the median salary of the subset of those Tier 5 migrants which report that they earn a salary during their visit.
- **Tier 4:** The fiscal contributions are inferred from measures of the 'cost of living' for international students. The direct tax contribution of international students is assumed to be zero because the earnings of international students typically fall below the threshold which would make them subject to direct taxation. A measure of the 'cost of living'[26] is used to calculate the contribution to indirect tax contribution of international students.
- **Visitors:** The fiscal contributions of visitors to the UK are determined by their indirect tax contribution from spending. Data on the expenditures made by visitors during their trips to the UK is obtained from the ONS International Passenger Survey 2016.

The IA assumes that those deterred from applying for nationality do not yield a loss to the Exchequer. This is because nationality products are optional and deterred applicants are still eligible to for leave to remain in the UK, even if they do not apply. Deterred applicants are therefore assumed to continue to contribute to the Exchequer.

Methodology

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[24] MAC report available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/285220/Tier1investmentRoute.pdf

[25] Institute for Fiscal Studies (February 2015:57) "Green Budget" available at: http://www.ifs.org.uk/publications/7530. Earnings inflation data based on OBR Economic & Fiscal Outlook November 2017.

[26] Home office analysis based on Student income and expenditure survey 2011/12 available at: https://www.gov.uk/government/publications/student-income-and-expenditure-survey-2011-t0-2012

The analysis considers fiscal contribution for direct and indirect taxes.
For direct taxes the analysis applies income tax and National Insurance contribution rates from 2017/18 to the income estimates for each visa category.

Council tax contributions are estimated based ONS estimates of council tax contribution by income decile[27]. These estimates are adjusted by the number of economically active people per household to estimate an individual's council tax contribution. The amount spent on council tax for each income decile is then applied to the income estimates for each visa category. Income decile of the salaries for visa categories is based on the same distribution used in the ONS estimates.

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. However, robust data on the expenditure of migrants is not available and there is uncertainty about their spending patterns. Therefore, for indirect tax contributions the analysis applies a similar approach as taken for council tax. ONS estimates[28] are used to calculate the proportion of income spent on indirect tax for each earning decile, these proportions are then applied to the estimated income for each visa category. Income levels used to calculate contributions to indirect taxes are adjusted for estimated remittance rates[29]. The ONS data include a range of indirect and intermediate taxes. The analysis excludes intermediate taxes paid for employers' National Insurance Contributions as this is considered a transfer between employers and the Exchequer. The analysis also does not make further adjustments to cover other taxes (for example environmental levies or capital gains tax), therefore it is possible that the estimates do not reflect contributions to all indirect and intermediate taxes.

For international students, indirect tax contributions are estimated based upon measures of the cost of living facing these groups[30]. For visitors to the UK, indirect tax contributions are inferred from estimates based upon the average expenditure of visitors during their visit. As mentioned previously, contributions to indirect taxes by visitors are based on the VAT rate, however this quantification does not make further adjustments on VAT refunds that visitors from outside the European Economic Area are entitled to, and therefore it is likely to be an overestimate[31].

The estimates of the fiscal contribution of migrants only include direct and indirect tax contributions from migrants themselves. The analysis does not account for any impact that migrants may have on the fiscal contributions of the resident population. For example, this may occur through the impact of migrants on the productivity and wages of resident workers or through the impact of any displacement of resident workers that may result from migration.

[27] ONS publication on "The effect of taxes and benefits on household income 2015/16"; April 2017. https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/bulletins/theeffectsoftaxesandbenefitsonhouseholdincome/financialyearending2016

[28] ONS publication on "The effect of taxes and benefits on household income 2015/16"; April 2017. https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/bulletins/theeffectsoftaxesandbenefitsonhouseholdincome/financialyearending2016

[29] Remittance assumptions are based on the same assumptions used in the 2016 Fee order impact assessment, which were based on Understanding Society – Findings 2012, available at https://www.understandingsociety.ac.uk/research/publications/findings/2012. More recent updates of this analysis on remittances are not available.

[30] Data on cost of living for students is based on the Student Income and Expenditure Survey (SIES) 2011/12 (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/301467/bis-14-723-student-income-expenditure-survey-2011-12.pdf).Results have been uprated with inflation to 2017/18 prices.

[31] Non-EU nationals visiting the UK are entitled to VAT refunds under some circumstances https://www.gov.uk/tax-on-shopping/taxfree-shopping.

Results

The following table shows the expected contribution per year to direct and indirect tax by selected types of visa applicants. Results are based on the salary estimated for each visa category.

Table A4.5 Expected contribution per year to direct and indirect tax by selected types of visa applicants, 2017/18 prices, £.

Visa Product	Estimated yearly contribution to direct and indirect taxes
Tier 1 – Entrepreneur, standard – Main Applicant	4,800
Tier 1 – Entrepreneur, standard – Dependant	1,900
Tier 2 - General; Long term ICT; Sport and MoR - Main Applicant	17,500
Tier 2 - General; Long term ICT; Sport and MoR - Dependant	1,900
Tier 4 - Main Applicant	2,700
Tier 4 - Dependant	1,900
Tier 2 - General (in-UK) - Main Applicant	13,300
Tier 4 - Main Applicant	2,700
Tier 5 - Main Applicant	4,400

Source: Home Office internal analysis

ANNEX 5 – Displacement Assumptions

Displacement

Labour market displacement occurs when employment opportunities in the UK that could be filled by UK natives (UK born or UK nationals) are instead filled by migrants (foreign born or foreign nationals). The Government commissioned the Migration Advisory Committee (MAC) to analyse the impact of displacement on the UK labour market, culminating in a report in January 2012.[32] Building on this, the Home Office and the Department for Business, Innovation and Skill published a literature review on the impacts of migration on UK native employment.[33] This Annex sets out how these reports' findings have been applied in this IA.

The assumptions that are used in this IA, and described below, reflect the current Home Office position, but do not represent a cross-Government consensus.

Rate of Displacement

This IA uses displacement assumptions build upon the evidence provided by the MAC report (January 2012). The report estimated the association between migration and native employment in Great Britain, using data from the Labour Force Surveys between 1975 and 2010. For the purpose of the report, natives were defined as UK-born individuals. The headline result was that a one-off increase of 100 in the inflow of working-age non-EU born migrants is associated with a reduction in native employment of 23 people (this is based on analysis of data spanning 1995 to 2010). The MAC report implied that this result held in all periods, including periods of economic growth as well as contraction.

The Home Office / BIS literature review concluded that:

- There is relatively little statistically significant evidence of migrants' displacement of UK natives from the labour market in periods when the economy has been strong, but some evidence that some labour market displacement has occurred in recent years when the economy was in recession.
- Displacement effects are also more likely to be identified in periods when net migration volumes are high, rather than when volumes are low – so analyses that focus on data prior to the 2000s are less likely to find any impacts. Where displacement effects are observed, these tend to be concentrated on low skilled natives.
- This suggests that the labour market adjusts to increased net migration when economic conditions are good. But during a recession, and when net migration volumes are high as in recent years, it appears that the labour market adjusts at a slower rate and some short-term impacts are observed.
- To date there has been little evidence in the literature of a statistically significant impact from EU migration on native employment outcomes, although significant EU migration is still a relatively recent phenomenon and this does not imply that impacts do not occur in some circumstances.
- The evidence also suggests that, where there has been a displacement effect from a particular cohort of migrants, the effect dissipates over time – that is, any displacement impacts from one set of new arrivals gradually decline as the labour market adjusts, as predicted by economic theory.

Further analysis has led to the working assumption that a one-off inflow of 100 low-skilled, working-age migrants will displace 15 native workers from employment (so that 15per cent of such migrants take jobs that would otherwise have gone to native workers) and that a similar increase high-skilled migrants will not displace any native workers from employment.

[32] MAC (2012) Analysis of the impacts of migration.

[33] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/287287/occ109.pdf

The following table lists the full set of displacement assumptions currently used in Home Office analyses.
Table A5.1 Displacement rate assumptions for different types of migrants in different economic circumstances

Economic context	Migrant Type	Scenario		
		Low	Central	High
Normal conditions	Skilled workers	0%	0%	0%
	Low skilled workers	0%	15%	30%
Severe downturn	Skilled workers	0%	0%	10%
	Low skilled workers	10%	30%	50%

Length of Displacement

In implementing the volume of displacement, a key consideration is the tentative association in MAC (2012) that only those migrants who have been in the UK for less than 5 years are associated with displacement, not those who have been in the UK for over five years. This is not directly applicable to IA's, which show impacts annually. Therefore, without further evidence to suggest otherwise, displacement is assumed to diminish equally each year over a five-year period, for each particular cohort of migrants. It is also assumed that those who are removed from the UK may have already spent a period of time in the UK and may be associated with a lower level of displacement. However, the length of time in the UK is not known, so it is assumed that migrants would have been in the UK for between 0 and 5 years. For this reason, this IA assumes that displacement effects last for 3 years in the Central scenario, 1 year in the 'Low' and 5 years in the 'High' scenario.

Displacement by Cohort

The tracking over time of displacement is measured per cohort of immigrants. In any year that there is an inflow of migrants, these are classed as one cohort specific to that year. The following year, there will be another inflow of migrants, and while these add to the existing stock of migrants, they are an individual cohort specific to year 2. When displacement is measured over time, it is done so per cohort. This means that moving from one year to the next, there will be a new cohort arriving, but the previous year's cohort will have its own diminishing effects still occurring.

Illustrative Example

This can be seen in Table A5.2, which sets out an illustrative example for assessing the impact of displacement over time for each cohort, where it is assumed that the displacement effects (15per cent) occur over a five-year period.

Working through the following table : each year, from year 1 through to year 6, sees a number of workers entering the UK; the number of workers entering in year 1 (200) belong to cohort year t (t reflects a cohorts first year); so looking only at year 2, the number entering in year 2 (300) belong to cohort year t (as this is their first year), and the cohort which entered in year 1 become part of cohort t-1; in year 3, those who entered in year 2 will become part of cohort year t-1, and those who entered in year 1 will become part of cohort year t-2; as the effect of displacement declines over time, a particular years cohort will displace fewer UK natives as that cohort progresses through time; so the 200 migrants in year 1 will displace 30 natives in year 1, 12 in year 2, 9 in year 3, 6 in year 4, 3 in year 5, and 0 in year 6.

Table A5.2 Illustrative example of the impact of displacement (5-year displacement assumed).

		Migrants present in:					
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Arrival Year	t	200	300	250	600	400	200
	t-1		200	300	250	600	400
	t-2			200	300	250	600
	t-3				200	300	250
	t-4					200	300
	t-5						200
Sum		**200**	**500**	**750**	**1350**	**1750**	**1950**

		Assumed displacement of native workers (%) in:					
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Arrival Year	t	15%	15%	15%	15%	15%	15%
	t-1		12%	12%	12%	12%	12%
	t-2			9%	9%	9%	9%
	t-3				6%	6%	6%
	t-4					3%	3%
	t-5						0%

		Assumed displacement of native workers (No.) in:					
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Arrival Year	t	30	45	37.5	90	60	30
	t-1		24	36	30	72	48
	t-2			18	27	22.5	54
	t-3				12	18	15
	t-4					6	9
	t-5						0
Sum		**30**	**69**	**91.5**	**159**	**178.5**	**156**

Note: Figures are purely illustrative

Replacement Effects

Whilst the above outline of displacement is considered to be a cost, a benefit would arise if measuring the impact of migrants leaving the UK, or migrants deterred from coming to the UK. This is known as a replacement effect. MAC (2012) tentatively suggests that any reduction in native employment associated with migrant inflows is equal to an increase in native employment associated with equivalent migrant outflows. Furthermore, as it is not known for how long migrants who leave the country were in the country, the central estimate is that they stayed here for 3 years, and this is taken into account when assessing the replacement effect (essentially, a migrant leaving after staying for 3 years will permit replacement of fewer UK residents than a migrant leaving after staying for only 1 year).

Application to this IA

The policy changes considered in this IA may result in a reduction in the number of migrants coming to, or remaining in the UK. These changes are assumed to result in replacement effects. The assumption is that, of the number of low skilled immigrants that leave the UK that were employed, 15 per cent of the employment vacated will be filled by UK natives in the low and central scenarios and 30 per cent in the high scenario. In line with the displacement assumption, this IA assumes that replacement effects last for

3 years in the Central scenario, 1 year in the 'Low' and 5 years in the 'High' scenario. The following table illustrates how the effect tapers in the three considered scenarios.

Table A5.3 Replacement rate assumptions under different scenarios, (%).

Scenario	Initial Replacement Rate (%)	Taper	Year 1	Year 2	Year 3	Year 4	Year 5
Low	15	1 Year Taper	100	0	0	0	0
Central	15	3 Year Taper	100	67	33	0	0
High	30	5 Year Taper	100	80	60	40	20

The changes in fee level considered in this IA are anticipated to result in a small fall in the volume of applicants to whom the replacement assumption is applied. Consequently, when rounding to the nearest 10 the estimated volume of additional UK residents employed in each year rounds to zero. This annex does therefore not present a breakdown of the effect of the replacement assumption on the employment of UK residents.