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Estimating the Value to the UK of
Education Exports

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Glossary

AoC	Association of Colleges
BIS	Department for Business Innovation and Skills
CPI	Consumer Price Index
DELNI	Department for Employment and Learning in Northern Ireland
DfID	Department for International Development
DIUS	Department for Innovation, Universities and Skills
E&Y EIM	Ernst and Young European Investment Monitor
ELT	English Language Training
FCO	Foreign and Commonwealth Office
FDI	Foreign Direct Investment
FE	Further Education
FEC	Further Education College
HE	Higher Education
HE-BCI	Higher Education-Business and Community Interaction
Hefce	Higher Education Funding Council for England
Hefcw	Higher Education Funding Council for Wales
HEI	Higher Education Institution
HEPI	Higher Education Policy Institute
HESA	Higher Education Statistics Agency
ILR	Individualised Learner Record
IPS	International Passenger Survey
ISC	Independent Schools Council
ITIS	International Trade in Services

ONS	Office for National Statistics
ORSAS	Overseas Research Student Awards Scheme
SFC	Scottish Funding Council
SIES	Student Income and Expenditure Survey
SORSAS	Scottish Overseas Research Student Awards Scheme
TNE	Transnational Education
UKBA	UK Border Agency
UUK	Universities UK

Executive summary

Baseline

We estimate the value of UK education exports to be **£14.1 billion** in 2008/09, with education-related projects attracting a total of £9.6 million Foreign Direct Investment. The breakdown of total export income is presented in Table 1.

Table 1: Value of education and training exports to the UK economy, 2008/09

Sector	2008/09 (£m)
Higher Education	7,873.5
<i>Tuition fees</i>	2,442.3
<i>Other spending of overseas HE students in the UK</i>	4,344.9
<i>Transnational education (HE)</i>	210.8
<i>Income from research grants and contracts</i>	647.9
<i>Income from licensing intellectual property</i>	46.6
<i>Income from consulting, facilities and equipment</i>	84.9
<i>Income from overseas alumni, international charitable organisations</i>	34.5
<i>Other income from overseas (HE)</i>	61.6
Further Education	1,070.3
<i>Tuition fees</i>	138.6
<i>Other spending of overseas FE students in the UK</i>	867.6
<i>Transnational education (FE)</i>	26.8
<i>Other income from overseas (FE)</i>	37.3
English language training	1,996.2
<i>Tuition fees</i>	879.5
<i>Other spending of overseas ELT students in the UK</i>	1,116.7
Qualification awarding bodies	17.5
Independent primary and secondary schools	478.9
Private sector training	1,480.0
Education-related publishing	749.0
Education-related equipment	453.0
Education-related consultancy	*
Education-related broadcasting	24.5
Total value of UK education and training exports	14,143.0
Total value of education-related Foreign Direct Investment	9.6

Source: London Economics * Due to the high risk of double-counting, a separate estimate for education-related consultancy is not provided. This does not mean that the value of education-related consultancy exports is nil, but rather that the value of such exports is included in other categories. Totals may not sum due to rounding.

Comparisons

In Table 2, we provide a comparison of the estimates generated in the current report with those produced by the other primary authors in the field (all in 2008/09 prices).

Table 2: Value of education and training exports to the UK economy (£m), 2001-02 to 2008-09

Sector	Johnes (2004)	Lenton (2007)		LE (2010)
	2001/02	2002/03	2003/04	2008/09
Higher Education	4,571	5,705	6,484	7,873.5
- Tuition	1,431	2,063	2,344	2,442.3
- Other spending	2,121	2,483	2,939	4,344.9
- Transnational Higher Education	113	215	218	210.8
- Other Higher Education	906	944	983	875.5
Further Education:	705.0	1,332.0	1,340.0	1,070.3
- Tuition, excluding ELT	44	49	51	138.6
- Other spending, excluding ELT	346	528	555	867.6
- Other Further Education	315	755	734	64.1
English language teaching	1,493	1,132	1,223	1,996.2
Examination/professional bodies	172	189	220	17.5
Independent primary and secondary	248	277	350	478.9
Private sector training	2,105	1,521	1,549	1,480.0
Publishing	1,059	1,510	1,568	749.0
Educational equipment	575	585	596	453.0
Consultancy (1)	13,418	16,133	16,827	*
Broadcasting	751	743	755	24.5
Total (2008/09 prices)	25,096	29,126	30,913	14,143.0
<i>Total excluding consultancy item (1)</i>	<i>11,678</i>	<i>12,993</i>	<i>14,086</i>	<i>14,143.0</i>
Total value of education-related FDI	-	-	-	9.6

Note: All figures have been adjusted for CPI and so are valued at 2008/09 prices. * Due to the high risk of double-counting, a separate estimate for education-related consultancy is not provided. This does not mean that the value of education-related consultancy exports is nil, but rather that the value of such exports is included in other categories. Totals may not sum due to rounding.

Source: London Economics, Johnes (2004), Lenton (2007)

Forecasts

The analysis suggests that from the current baseline of £14.1 billion, the value of the education-related export market might be approximately **£21.5 billion** in 2020 and **£26.6 billion** in 2025 (both in 2008/09 prices). This represents an annual growth rate of approximately 4.0% per annum in real terms.

Table 3: Value of education related exports to the UK economy, 2010-2025 (2008/09 prices)

Sector	2008/09	2010	2015	2020	2025
Higher Education	7,873.5	8,245	10,412	13,220	16,896
<i>Tuition fees</i>	2,442.3	2,557	3,217	4,048	5,093
<i>Other student spending</i>	4,344.9	4,549	5,723	7,201	9,060
<i>Transnational Education</i>	210.8	230	356	550	849
<i>Research grants</i>	647.9	661	730	806	889
<i>Licensing IP</i>	46.6	48	55	64	74
<i>Consulting, facilities and equipment</i>	84.9	94	159	267	450
<i>Donations</i>	34.5	37	49	65	86
<i>Other income</i>	61.6	69	124	221	394
Further Education	1,070.3	1,030	882	755	647
<i>Tuition fees</i>	138.6	127	108	92	78
<i>Other student spending</i>	867.6	840	714	607	516
<i>Transnational Education</i>	26.8	26	25	23	21
<i>Other income</i>	37.3	37	35	34	33
English Language Training	1,996.2	2,060	2,411	2,823	3,304
<i>Tuition fees</i>	879.5	908	1,062	1,244	1,456
<i>Other student spending</i>	1,116.7	1,152	1,349	1,579	1,849
Qualification awarding bodies	17.5	18	19	20	22
Ind. primary/secondary schools	478.9	514	735	1,050	1,501
Private sector training	1,480.0	1,517	1,716	1,941	2,197
Education-related publishing	749.0	768	869	983	1,112
Education-related equipment	453.0	507	567	716	871
Education-related consultancy	*	*	*	*	*
Education-related broadcasting	24.5	25	25	25	25
Total value of education exports	14,143.0	14,684	17,636	21,533	26,575

Source: London Economics analysis (2008/09 prices) * Due to the high risk of double-counting, a separate estimate for education-related consultancy is not provided. This does not mean that the value of education-related consultancy exports is nil, but rather that the value of such exports is included in other categories. We have rounded forecasts to zero decimal places to avoid creating the impression the figures are precise; however, have rounded validated figures (i.e. historical and baseline estimates) to one decimal place to provide as much detail as we think the data accurately supports. As such, totals may not sum due to rounding.

Context

The government is keen to support the UK education and training sector to develop international partnerships and continue attracting overseas students. Not only does this increase the United Kingdom's profile on the world stage, but also it provides the sector with opportunities to attract revenue and investment from overseas, which contribute to the UK economy.

To inform the government's policy and efforts in support of the sector, the Department for Business, Innovation and Skills (BIS) commissioned London Economics to establish a comprehensive estimate of the total value of overseas trade and investment in education-related activities to the United Kingdom economy. Having established the baseline value, the research also assembles historical trends and forecasts that will help understand the future growth potential and the United Kingdom's global share of the education-related activities over the next 10 years and beyond.

This will help BIS to formulate a supportive policy framework to allow Higher Education (HE) and Further Education (FE) and associated business sectors to increase their income from overseas and attract more foreign direct investment, contributing to the economic growth of the United Kingdom economy.

Definition of 'overseas trade and investment in education-related activities'

First it is necessary to define 'overseas trade and investment in education-related activities'.

Overseas trade (or international trade) is the sale of goods and/or services across international borders. Education is a tradable sector with imports and exports like any other tradable sector, such as manufacturing. This research report focuses solely on exports, which contribute to the United Kingdom economy as an injection of income from an overseas source (i.e. a non-UK origin). The guiding definition for export income for inclusion in our valuation is that the income derives from an overseas source. Where an activity is partially financed from a UK domestic source (e.g. a UK-funded scholarship for tuition fees), this is offset against the export income.

We also seek to estimate the total value of the investment attracted by the sector from investors domiciled outside the United Kingdom. This is known as foreign direct investment (commonly abbreviated to FDI and inferring an ownership share of 10% or more). Non-UK domiciled means that the individual investor's permanent home is in a country outside the United Kingdom. Note that domicile is distinct from nationality or residence - it is possible to be 'resident in the United Kingdom' for a number of years but 'domiciled abroad'.

The definition of what constitutes an 'education-related activity' is more ambiguous and requires further consideration. The first point to note is that, strictly speaking, 'education-related' is a broader concept than 'educational' activities, which may only include the activities where education is either the 'process' (e.g. teaching, training) or the 'output'

(e.g. research, educational consultancy). In particular, education-related activity includes activities where education is an 'input' (e.g. export value added by UK-educated graduates); however, we believe that adopting this wider definition of education exports incorporates many human capital related services that should not be included into this measurement exercise. Specifically, we do not think it sensible to include the exports that might be generated in the financial services sector that result from the activities of UK educated graduates (for instance, a UK educated maths graduate generating income (and profit) for a UK firm through commodity trading with a counterparty based in Switzerland). Therefore, we include all activities within the education 'process' and associated 'outputs', but exclude any activity pertaining to the education 'input'.

Finally, in the definition of education exports, we include the value of goods and services supplied to support the education exporting sector (e.g. educational equipment that facilitates the exporting of education services).

The education-export sectors of the economy covered in this research report consist of the exported teaching and research activities of Higher Education institutions (HEIs) and Further Education Colleges (FECs); the provision of teaching and boarding services at independent primary and secondary schools; the overseas services of examination and professional bodies; the activities of English language schools; private sector training for adults; the activities of businesses providing services to these sectors; and education-related publishing, broadcasting and consultancy activities.

Examples of education-related activities that generate income from overseas include: fee income from non-UK domiciled students studying at an institute of education; income from the accreditation of courses administered overseas; income from research grants, contracts and collaborations procured overseas; contributions from alumni located overseas; charitable donations from overseas; income from internationally-located spin-outs and the licensing of intellectual property overseas.

It is worth noting that this definition may be broader than that used in the UK's official National Accounts due to difference in either categorisation or coverage. National Accounts (NA) data are collected and reported on the basis of agreed international classifications for both Industries (UN International Standard Industrial Classification of All Economic Activities, ISIC Rev.4) and Products (IMF Balance of Payments and International Investment Position Manual, BPM5). Trade in services is reported on a product basis in the UK Balance of Payments Pink Book, but is currently reported as an identifiable education-related activity only for travel-related educational services in Higher and Further Education (fees and living expenditure). A number of other education exports may be covered by the NA data, however, these are not separately identified as education-related (for example research and development, consultancy and broadcasting activities). Differences also arise due to the extent of coverage of the sector in the National Accounts. Education exports undertaken by the non-market education sector are not covered by the ONS International Trade in Services inquiry (ITIS), which is the main source of business services trade data and is limited to businesses that operate in the market sector.

Following previous studies (Johnes, 2004; Lenton, 2007), we adopt the 'building block' approach to the total value estimate for the sector.

Previous studies

In recent years, there has been increasing recognition of the importance of education and training exports and a number of studies have been undertaken to estimate the value of the sector to the United Kingdom economy.

The first comprehensive estimate of the current value of education and training exports, by Bullivant (1998) for the Department for Education and Employment, put the estimated total value of education exports at approximately £5.5 billion in 1997, plus an additional £1 billion to cover activities that were not possible to value (equivalent to approximately £9.0 billion in 2008/09 prices). More recently, the value of education and training exports has been estimated in two studies published within the last 10 years, both commissioned by the British Council (Johnes (2004) and Lenton (2007)). These studies found that the education sector generated income originating from overseas ranging between approximately £22.1 billion in 2001 02 (Johnes, 2004) to £27.8 billion in 2003 04 (Lenton, 2007). Adjusting these analyses to account for inflation implies that the estimates of the value of UK education related exports stand at between **£25.1 billion** and **£30.9 billion** in 2008/09 prices; however, there are some extremely important methodological differences between these estimates and the estimates to be presented in this report.

A summary of the findings, with details of the main categories is given in Table 4.

Table 4: Value of education and training exports to the UK economy (£m), 2001-02 to 2003-04

Sector	Johnes (2004)	Lenton (2007)	
	2001–02	2002–03	2003–04
Higher Education:	4,017	5,075	5,825
- Tuition	1,258	1,835	2,106
- Other spending	1,864	2,209	2,640
- Transnational Higher Education	99	191	196
- Other Higher Education	796	840	883
Further Education:	620	1,186	1,204
- Tuition, excluding ELT	39	44	46
- Other spending, excluding ELT	304	470	499
- Other Further Education	277	672	659
English language teaching	1,312	1,007	1,099
Examination/professional bodies	151	168	198
Independent primary and secondary	218	246	314
Private sector training	1,850	1,353	1,392
Publishing	931	1,343	1,409
Educational equipment	505	520	535
Consultancy	11,793	14,352	15,117
Broadcasting	660	661	678
Total (current prices)	22,057	25,910	27,772
Total (2008/09 prices)	25,096	29,126	30,913

Source: Lenton (2007), citing Johnes (2004), current prices

The task of estimating the value of these sectors is not a straightforward one, and the data used to estimate the values in some component categories is not as robust as in others. Furthermore, the studies presented above considered only *current account transfers*, whereas a more complete valuation would include *foreign direct investment* coming into the United Kingdom in these educational sectors.

There are some obvious methodological weaknesses associated with the analyses that have been undertaken to date, and in the next section, we provide a detailed exposition of the nature of the analysis that we have used (compared with the previous studies) in order to improve the estimates of the value of education exports in the United Kingdom.

The current study aims to update previous estimates whilst improving on the estimation methodology. The remit of this study is broader than previous studies, and also includes a global view of the international education market and a forward-looking perspective on the potential for growth for each activity.

Objectives of the research

In commissioning this research, the Department for Business, Innovation and Skills was seeking to:

- build on the work undertaken on behalf of the British Council (Johnes 2004; and Lenton 2007) and address some of the issues relating to apportionment, for example in publishing, broadcasting and consultancy as identified by the authors;
- extend the coverage of research income; and
- produce an estimate of the value of Foreign Direct Investment (FDI) into the UK.

The study has three specific aims, outlined as follows:

Aim 1: The primary aim is to estimate the value of trade and inward investment associated with Higher and Further Education institutions and businesses operating in the education-related services sectors in the UK.

The estimate covers all forms of activity that generate income from overseas (as identified in Lenton (2007) for the British Council, with the addition of Foreign Direct Investment) as follows:

- Higher Education
- tuition and other spending of overseas students in the UK
- transnational education
- income from research grants, contracts and collaborations
- income from spinouts and licensing intellectual property

- income from overseas alumni
- international charitable organisations, and
- any other contribution
- Further Education
- tuition and other spending of overseas students in the UK
- transnational education, and
- any other contribution
- Language training
- tuition and any other contribution
- Examination/ professional bodies
- Independent primary and secondary schools
- Private sector training
- Publishing (education component)
- Educational equipment
- Consultancy (education component)
- Broadcasting (education component)
- Foreign Direct Investment

Aim 2: To provide a summary and assessment of the available evidence on the growth and demand of each of the activities associated with the income sources identified in Aim 1, worldwide, over the next 10 years and longer term.

Aim 3: To provide a summary of evidence on the UK's share of the activities identified in Aim 1 and how the UK's share might be expected to change over the next 10 years and longer-term incorporating:

- demographic information on student numbers and young population;
- trends related to domestic research activity;
- changing shares of outward student mobility; and

- changing popularity of the UK as a destination for students, or partner for research/FDI.

Report structure

The remainder of the report is organised according to the three research aims. Section 2 details the calculations and presents our estimate of the value to the UK of overseas trade and inward investment (Aim 1). The structure of the section reflects the ‘building block’ approach, whereby the value of each education-related activity is estimated individually and then aggregated to give a total value estimate for the sector. Section 3 presents the forward-looking analysis covering Aim 2 (forecasts of growth in global demand for education exports to 2020 and beyond) and Aim 3 (forecasts of the UK’s share of the global education exports market to 2020 and beyond). In Section 4, we provide some indication of the impact of a number of policies relating to immigration and tuition fees on education exports between 2012 and 2025.

Baseline estimate of the value of UK education exports

Methodology

Our methodological approach to Aim 1 represents an extension and refinement of the previous work by Lenton (2007) and Johnes (2004) in reports for the British Council on the “Global Value of Education and Training Exports to the UK Economy”. Johnes (2004) set out a well-documented methodology for estimating the values of the education sectors identified, and Lenton (2007) advanced proceedings, seeking to improve the methodology where possible. Our approach, in turn, has been to review each step of the methodology used in Lenton (2007) for suitability, and where possible, improve and/or refine the subsequent estimates.

The first methodological improvement in our approach lies in the better definition of education related exports. Examples of such improvements incorporated into the current analysis include:

- an assessment of Foreign Direct Investment (FDI) in addition to current account transactions;
- an assessment of international research income; and
- a more precise focus on the education export element of consultancy, broadcasting and publishing export activity (‘process’ and ‘output’ related activity rather than the consideration of educational ‘inputs’).

The second methodological improvement relates to the use of better data sources and new research studies to fill in gaps that existed at the time of Lenton’s work, whilst updating the data presented in Lenton (2007) where the data source remains the most appropriate.

The third methodological improvement is the use of bespoke survey data.

Confidential survey of Tier 4 sponsors

In order to address identified gaps in the available data in relation to income from overseas sources, we conducted a confidential survey of educational institutions as part of this research. In order to be able to admit students from outside the European Economic Area (EEA), a UK education institution must apply to the UK Border Agency for a Tier 4 sponsor licence.

All educational institutions and organisations registered with the UK Border Agency as a Tier 4 sponsor (including Higher Education institutions, Further Education institutions, private training organisations, English Language training institutions, Examination bodies, professional bodies, and independent primary and secondary schools) were invited to

participate in this survey. The survey was administered online (hosted on a London Economics' server, where all responses are securely stored subject to our data security and confidentiality policy).¹ Invitations were emailed to a confidential list of Tier 4 sponsor contacts by the UK Border Agency (as custodians of the contact list on behalf of London Economics) along with an introductory letter to the research project from the Department for Business, Innovation and Skills on headed paper (as a PDF). The information from survey responses is used throughout the report to formulate and refine estimates of the contribution of the education sector to the UK economy in Aim 1 (based on totals, averages and ratios of survey response data only) and inform the forward-looking analysis of Aims 2 and 3 to identify areas with strong future growth potential for UK institutions.

The survey received much interest with more than 960 responses, though a much smaller number of respondents provided responses to the substantive questions, which is likely to be due to the information requirements of participation. The overall achieved sample size (substantive responses only), response rate and the calculated sampling error are presented in Table 5.

Table 5: Response rate and sampling error for the confidential survey of Tier 4 sponsors

Measure	Value
Sample (substantive responses)	257
Population (Tier 4 sponsors)	2,270
Response rate	11.3%
Sampling error	5.8%

Note: The sampling error has been calculated at the 95% confidence level. The population figure for Tier 4 sponsors is based on the Register of Sponsors (Tier 4 General sponsors and Tier 4 Child sponsors) dated 03/12/2010.

Source: London Economics

The response rate varied by institution type, so we also present the achieved sample size (substantive responses only), response rate and the calculated sampling error by institution type in Table 6. These sampling errors should be borne in mind when considering estimates based on survey responses in the relevant sections of the report text.

¹ London Economics is registered as a Data Controller with the Information Commissioner's Office (registration Z1010343) and is committed to ensuring full protection of confidential data received as part of surveys undertaken directly or indirectly by London Economics. London Economics fully adheres to the ICC/ESOMAR International Code on Market and Social Research.

Table 6: Response rate and sampling error for the confidential survey of Tier 4 sponsors, by institution type

Institution type	Sample (complete responses)	Population	Response rate	Sampling error
	N	N	%	%
Higher Education institution	33	165	20.0%	15.3%
Further Education college	44	429	10.3%	14.0%
ELT institution	116	520	22.3%	8.0%
Ind. primary/secondary school	23	1,265	1.8%	20.3%
Private training organisation	28	n/a	n/a	n/a
Other (self-selected)	13	n/a	n/a	n/a

Notes: The sampling error has been calculated at the 95% confidence level. The population figures are the total number of institutions of that institution type in the UK, and do not sum to the total number of Tier 4 sponsors (2,270 as at 03/12/2010) as the proportion of each that is registered as a Tier 4 sponsor is unknown, though the difference in totals is not considered material. The total number of English Language training institutions registered with Accreditation UK has been used.

Source: London Economics

Reporting

In terms of reporting, the structure of the write-up of Aim 1 broadly follows that of Lenton (2007), with some activities split out and others added reflecting methodological improvements. Within each section, the approach to estimating the value of each activity is described in turn, specifically covering:

- a detailed explanation of our estimation methodology and data sources, highlighting methodological improvements since Lenton (2007);
- a review of other valuation estimates and recorded figures for the activity, explaining the strengths and weaknesses of each (where information exists), and the rationale for our selection of the data employed in our estimation;
- the estimate of the baseline value of the activity to the UK economy;
- comparison of our baseline value estimate to Lenton's 2003/04 (CPI inflated) estimates, explaining the reasons for any disparity and providing a critique of Lenton (2007) where relevant;
- comparison of our baseline value estimate with published Official Statistics, and an explanation if any significant disparity exists;
- a historical time series of the estimated value of the activity to the UK economy (where data permits); and
- a note of outstanding data gaps necessary to value the activity fully for future research.

Wherever possible, we present values for each of England, Scotland, Wales and Northern Ireland separately.

Higher Education

Tuition fees

When studying at a UK Higher Education Institution, EU students pay the same tuition fees as home-domiciled students: £3,145 per annum in England and Northern Ireland in 2008/09 and £1,255 in Wales². In Scotland, Scottish and EU students pay nothing; while non-Scottish students from the rest of the United Kingdom pay up to £1,775 per annum for non-medicine courses (and £2,825 for medicine-related courses)³. The amount charged to non-EU students for tuition is at the discretion of the individual Higher Education Institution.

In the case of Higher Education tuition fees there is excellent data on tuition fee income, broken down by domicile of student, provided in the HE Finance Plus publication from the Higher Education Statistics Agency (HESA). However, one slight issue with the HE Finance Plus data is that Home and EU domiciled students tuition fee income is only separated into EU domiciled and Home domiciled for Wales. All other regions have tuition fee income from UK and EU domiciled students coupled together (Table 7), which must be separated.

Table 7: Tuition fee income, 2008/09

	Non-EU domicile £m	EU domicile £m	Home domicile £m	UK & EU domicile £m	Total £m
England	1,890.5	-	-	3,899.6	5,790.1
Wales	74.1	10.8	234.2	245.0	319.2
Scotland	224.0	-	-	274.8	498.8
Northern Ire.	11.0	-	-	98.9	109.9
Total UK	2,199.6	-	-	4,518.3	6,718.0

Note: Since Scottish and EU students do not pay tuition fees for studying in HEI in Scotland, the value of £274.8m for UK and EU domicile students only consists of those students from England, Wales and NI that are studying at a Scottish HEI. Totals may not sum due to rounding.

Source: HE Finance Plus 2008/09, Table 6a Tuition fees and education contracts analysed by institution, domicile, mode, level and source 2008/09

² Welsh and EU students studying in Wales pay £1,255 per annum, while non-Welsh UK students pay £3,145.

³ As EU undergraduate students pay the same tuition fees as home-domiciled students, the analysis of tuition fee income for EU undergraduate students has been adjusted to reflect the absence of undergraduate tuition fees in Scotland.

In 2008/09, non-EU tuition-fee income was calculated to be £2,199.6 million. Table 7 shows this split by region of the United Kingdom, and it can be seen that a large proportion of this income (approximately 86%) is generated by English Higher Education Institutions.

Of the £4,518 million in tuition fee income derived from UK and EU domiciled students in 2008/09, the majority comes from full-time undergraduates (approximately £3,374 million). Of the remainder, approximately £279 million is attributable to part-time undergraduates. Full-time postgraduates contribute £554 million per annum and £311 million per annum is contributed by part-time postgraduates.

It is necessary to isolate the tuition fee income paid by non-UK EU students from total UK and EU domiciled fee income. To assess the proportion of UK and EU domiciled fee income derived from non-UK sources, it is necessary to apportion fee income according to the numbers of students attending Higher Education institutions in England, Wales, Scotland and Northern Ireland. However, it is important to note that EU undergraduate students studying at Scottish HEIs generally do not pay tuition fees. Therefore, we can exclude EU and UK domiciled students studying in Scotland (145,105 UK and 9,460 non-UK EU students) from the following analysis in the knowledge that all undergraduate income is generated from students domiciled in the UK.

Only a small proportion of the £274.8 million in tuition fee income from UK and EU students studying at Scottish universities is from EU students, as in general only EU postgraduates pay fees at Scottish universities. According to HE Finance Plus⁴, approximately £201.8 million of this tuition fee income is generated from UK (non-Scottish) undergraduates while £73.0 million is generated from EU and UK postgraduates⁵.

To make the appropriate split in UK and EU tuition fee income, we rely on student numbers. There are 368,970 non-UK students (undergraduate and postgraduate) studying in UK Higher Education institutions, of which 117,660 are from other EU countries (108,200 excluding those studying at Scottish HEIs) and 251,310 originate from outside of the EU. A further breakdown is provided in Table 8. Using this breakdown of EU to UK student numbers, we calculate EU students as a proportion of all EU and UK students to be 4.9% of full-time undergraduates and 2.3% of part-time undergraduates (England, Wales and Northern Ireland only); and 20.5% for full-time postgraduates and 5.4% for part-time postgraduates (UK including Scotland).

⁴ Table 6a, Tuition fees and education contracts analysed by institutions, domicile, mode, level and source, 2008/09, HE Finance Plus

⁵ This implies that the total tuition fee income excluding Scottish UK undergraduates is £4,316.5 million, of which £3,183.7 million comes from full-time undergraduates, and of the remainder, approximately £267 million is attributable to part-time undergraduates. Full-time postgraduates contribute £554 million per annum and £311 million per annum is contributed by part-time postgraduates, as before.

Table 8: Full-time and part-time students at UK Higher Education institutions, 2008/09

	Undergraduate			Postgraduate		
	UK excl. Scotland	Non-UK EU excl. Scotland	Non-EU	UK	Non-UK EU	Non-EU
Full-time	1,004,535	51,715	95,995	119,285	30,795	117,920
Part-time	524,020	12,200	16,215	234,145	13,490	21,180
Total	1,528,555	63,915	112,210	353,430	44,285	139,100

Note: The figures for UK and non-UK EU Undergraduates exclude those that attend Scottish Universities. Totals may not sum due to rounding.

Source: HESA: Students in Higher Education institutions 2008/09, table 1, cited by Higher Education in facts and figures, UUK.

Using these proportions, we can estimate the tuition fee income derived from EU students⁶. In total, EU students contribute approximately £292.6 million of the combined UK and EU tuition fee income⁷, with the majority attributable to full-time students.⁸

It is important to note that when we are making this calculation we are assuming that, on average, an EU postgraduate student pays the same average tuition fee as a UK-domiciled postgraduate student. However, in reality fees charged by Higher Education institutions for postgraduate courses are left to the market, and we do not know if EU students have a particular preference for more or less expensive courses than their UK-domiciled counterparts. Therefore, the true amount that EU postgraduates contribute in tuition fee income may be marginally higher or lower than our estimate.

We do not have this problem when estimating the tuition fee income for EU undergraduate students, as in general students pay the same tuition fees as UK students (£3,145 in England and Northern Ireland and £0 in Scotland in 2008/09). In Wales, EU students pay £1,255 per annum compared to £3,145 charged to non-Welsh UK domiciled students, although this information is collected directly as part of HE Finance Plus.

Therefore, combining tuition fee income from non-EU and EU-domiciled students, the total contribution to Higher Education institutions in the UK from overseas of tuition fee income is approximately **£2,492.2 million**⁹. Table 9 shows this estimate decomposed by Devolved Administration.

⁶ By multiplying these proportions by the total value of UK and EU domicile tuition fee income

⁷ Of this, £175.1 million is attributable to full-time undergraduates

⁸ £155.9 million comes from full-time undergraduates and £113.6 million comes from full-time postgraduates

⁹ Tuition fee income from non-EU students (£2,199.6m) + tuition fee income from EU students (£292.6m)

Table 9: Tuition fee income from overseas students, by devolved administration, 2008/09

	Non-EU domicile £m	EU domicile £m	Non-EU and EU domicile £m
England	1,890.5	259.0	2,149.5
Wales	74.1	10.8	84.9
Scotland	224.0	12.4	236.4
Northern Ireland	11.0	10.4	21.4
Total UK	2,199.6	292.6	2,492.2

Note: The value for EU domiciled students in Scotland is positive because we are also including tuition fee income from postgraduate students. Therefore £12.4 million is the tuition fee income from EU students studying in Scottish HEIs for a postgraduate qualification, since tuition fee income from EU students studying for an undergraduate in Scotland is zero. Totals may not sum due to rounding.

Source: HE Finance Plus 2008/09, Table 6a Tuition fees and education contracts analysed by institution, domicile, mode, level and source 2008/09, London Economics analysis.

Fee remission

HESA, who produce the data on tuition fee income in HE Finance Plus, state that:

“Where the amount of the tuition fee is reduced, or in substance, the right to consideration of tuition fees is reduced, income receivable should be shown net of the discount. If payment from an outside fund (including Overseas Research Students Awards Scheme (ORSAS)) is received to meet the cost of fees, such income should be shown as if it were fees income. The total tuition fees should be the same as that shown in the audited financial statements.”

Therefore, the figures on tuition fee income from HE Finance Plus take into account fee remission. However, tuition fees of overseas students that are paid for by UK sources (such as central government departments) via scholarships are still included in overseas tuition fee income, despite the fact that they originate from the UK. Although relatively small in magnitude, we need to remove this item from our estimate of tuition fee income from overseas students.

There are three major scholarships that overseas students can apply for to fund a degree in the UK. The first is the *Overseas Research Student Awards Scheme* (ORSAS), which is available to full-time non-EU postgraduate students. The total budget for the ORSAS is £15 million per annum¹⁰, and is funded by Hefce, Hefcw, the Scottish Funding Council (SFC) and Department for Employment and Learning in Northern Ireland (DELNI). However, Hefce and Hefcw will not fund ORSAS after 2009, and the Department for Employment and Learning in Northern Ireland has decided to initiate a phased withdrawal of funding over 2009/10 and 2010/11. However, the SFC will run a rebranded Scottish

¹⁰ Page 12, Review of the Overseas Research Students Awards Scheme (ORSAS), Report by the Knowledge Partnership for the UK higher education funding bodies

Overseas Research Students Award Scheme (SORSAS) in 2009/10 with a budget of approximately £2.8 million per annum.

The second scholarship programme provided to students from overseas wishing to study a postgraduate degree or become a researcher in the UK is the Chevening programme. This is funded by income from the Foreign and Commonwealth Office (FCO) and private companies. In 2007/08, the budget for this programme was £26.5 million¹¹ and in 2008/09 it was £23.7 million¹². There was a decrease because the FCO undertook a review of the scholarship scheme and wanted to 'propose a smaller, better organised programme, focused on the leaders of tomorrow, from a range of backgrounds.'¹³

The final scholarship programme funded by FCO and the Department for International Development (DFID) is the Commonwealth Scholarship and Fellowship Plan. It is a Commonwealth-wide programme aimed at providing awards for students at postgraduate level from another Commonwealth country. In 2007/08, DFID and FCO contributed £7.5 million and £0.86 million respectively to tuition fees under this scholarship programme, a total of £8.4 million. The respective figure for 2008/09 was £9.0 million¹⁴. As well as reducing funding for the Chevening Scholarship, the FCO has decided to phase out funding for Commonwealth Scholarships and fellowships. The total allocation of £2.1 million¹⁵ will be reduced to £1.1 million in 2009/10 and £400,000 by 2010/11. On the other hand, DFID have no plans of reducing their expenditure on this scholarship scheme in the near future.

A final scholarship scheme that is worth noting is the Marshall Scholarship, which finances American students through postgraduate degrees in the UK. The majority of funding for Marshall Scholarships comes from different sources within the United States, but a small proportion, approximately £2.2 million in 2008/09, is from the FCO in the UK.

¹¹ Letter to the committee specialist from the Head, Parliamentary Relations Team, Foreign and Commonwealth Office.

<http://www.publications.parliament.uk/pa/cm200809/cmselect/cmcaff/195/195we97.htm>

¹² Letter to the committee specialist from the Head, Parliamentary Relations Team, Foreign and Commonwealth office.

¹³ UK Withdrawal of Support for Commonwealth Scholarships to Students from More Developed Commonwealth Countries, A Council for Education in the Commonwealth Briefing Note, Council for Education in the Commonwealth.

<http://www.cecomm.org.uk/attachments/CEC%20Briefing%20Note%20on%20FCO%20funding%20decision%20re%20CSFP%20.pdf>

¹⁴ £862, 895 from FCO and £8,162,002 from DFID. Calculated using estimates from the Letter to the committee specialist from the Head, Parliamentary Relations Team, Foreign and Commonwealth Office

<http://www.publications.parliament.uk/pa/cm200809/cmselect/cmcaff/195/195we97.htm>,

¹⁵ The total allocation of £2,050,000 includes money towards tuition fees, maintenance, airfares, thesis expenditure, management fees etc.

Table 10: Time series of UK-based expenditure on scholarships for overseas students

	ORSAS £m	Chevening £m	Common- wealth £m	Marshall £m	Total (current prices) £m	Total (constant prices, 2008/09) £m
2005/06	15.0	27.3	8.0	2.1	52.6	56.6
2006/07	15.0	26.5	8.0	2.1	51.6	54.3
2007/08	15.0	26.5	8.4	2.1	51.9	53.5
2008/09*	15.0	23.7	9.0	2.2	49.9	49.9

Note: * 2008/09 values for Chevening, Commonwealth and Marshall scholarships are projections. Totals may not sum due to rounding.

Source: Review of the Overseas Research Students Awards Scheme (ORSAS), Report by the Knowledge Partnership for the UK Higher Education funding bodies, Letter to the committee specialist from the Head, Parliamentary Relations Team, Foreign and Commonwealth office. <http://www.publications.parliament.uk/pa/cm200809/cmselect/cmcaff/195/195we97.htm>, Commonwealth Scholarship Commission in the UK 49th annual report (2008)

Therefore, the total contribution to scholarships for overseas students was £49.9 million in 2008/09 and £53.5 million in 2007/08. Taking the £49.9 million away from our estimate of tuition fee income, we arrive at a figure of **£2,442.3 million** for the net income from tuition fees from non-UK domiciled students in 2008/09¹⁶.

Using the same methodology as before, we have also backdated our estimates to 2004/05 (Table 11). It is interesting to see that over time net tuition fee income from overseas students has increased by more than 40% over the period in question.

¹⁶ As the graduate endowment scheme (a fixed fee (£2,289 in 2006/07) paid by students after graduation) applied in Scotland prior to 2007, the estimates of total tuition fee income in 2005/06 and 2006/07 include the fee income from overseas students in Scotland in these years.

Table 11: Time series of total tuition fee income from overseas students, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Tuition fee income	£1,720.1	£1,817.1	£2,039.4	£2,198.8	£2,492.2
Total scholarships from UK sources	-	£56.5	£54.3	£53.5	£49.9
Tuition fee income net of scholarships (current prices)	£1,720.1	£1,760.5	£1,985.0	£2,145.3	£2,442.3
Tuition fee income net of scholarships (constant 2008/09 prices)	£1,905.1	£1,908.4	£2,102.9	£2,206.7	£2,442.3

Note: No data on scholarship expenditure in 2004/05 was available. All figures have been adjusted for inflation using CPI. Totals may not sum due to rounding.

Source: Review of the Overseas Research Students Awards Scheme (ORSAS), Report by the Knowledge Partnership for the UK Higher Education funding bodies, Letter to the committee specialist from the Head, Parliamentary Relations Team, Foreign and Commonwealth office. <http://www.publications.parliament.uk/pa/cm200809/cmselect/cmfaff/195/195we97.htm>, Commonwealth Scholarship Commission in the UK 49th annual report (2008)

Previous research

The previous research by Lenton (2007) produced estimates for tuition fee income generated from overseas equivalent to £2,062.7 million in 2002/03 and £2,344.3 million in 2003/04 (in 2008/09 prices). Lenton's methodology differs from the approach used in this report. Whilst Lenton also used HESA data on student numbers, she used average tuition fees charged available from the Universities UK *Survey of Tuition Fees for International Students* (2003). To estimate other EU tuition fee income, Lenton multiplied the uniform fee charged to all EU undergraduates by the number of EU undergraduates, adjusting the total for fee remissions and scholarships. As no data on tuition fees paid by EU postgraduates was available, Lenton used survey evidence to estimate the average fee. This may explain why Lenton's estimates appear to marginally overestimate the true value of net tuition fee income from overseas students.

Given the fact that our estimate for non-EU tuition fee income was based on detailed information from the Higher Education Statistics Agency (HE Finance Plus), we believe it to be more robust than the original Lenton estimate. However, the caveat that Higher Education Statistics Agency data, and therefore our estimate, covers only publicly funded HEIs applies.

Other spending of overseas HE students in the UK

In addition to tuition fees, overseas students also pay for accommodation and other day-to-day expenses incurred in the UK over the duration of their study.

Full time students

Assuming that the level and pattern of expenditure by non-UK domiciled students is broadly similar to that of English domiciled students, we use data from the (former)

Department for Innovation, Universities and Skills (DIUS) Student Income and Expenditure Survey (SIES) to estimate that total other spending by overseas full-time students in the UK was approximately **£3,296.2 million** in 2007/08 and **£3,738.8 million** in 2008/09. This estimate is based on the workings explained below.

The most recent SIES data available covers the period 2007/08 and suggest that the average expenditure by English domiciled full-time students is £12,254 for the academic year 2007/08 (covering a period of 39 weeks)¹⁷, which represents a 7% increase in real terms from 2004/05¹⁸. This total expenditure includes tuition fees, living expenses, housing, participation and spending costs. The increase since 2004/05 was mainly due to a 43% increase in participation costs, caused by an increase in tuition fees. Living, accommodation and child-related spending costs in 2007/08 remained very similar to 2004/05.

Participation costs, as defined in the SIES, include tuition fees, the costs of course-related books, equipment and stationery, the costs of travelling to and from university, childcare and course fees. Since we are only interested in non-tuition fee expenditure by overseas students, we omit the tuition fee component of the participation cost in our estimate (to avoid double counting, as tuition fee expenditure is reflected in the tuition fee income of institutions estimated above). On average, a full-time English domiciled student spent £2,251 on tuition fees in 2007/08, and so the average other expenditure per full-time student is estimated to be £10,003 in the academic year 2007/08.

The SIES survey does not cover non-UK domiciled students, so it is not possible to generate a specific expenditure estimate for overseas students. However, it is not believed that the level and pattern of expenditure by non-UK domiciled students is significantly different to that of English domiciled students, so we assume that the average non-tuition fee expenditure per full-time international student is the same as English domiciled students.

We assume that on average, an EU undergraduate student spends 39 weeks in the UK and a non-EU undergraduate student spends 42 weeks in the United Kingdom¹⁹. This assumption is based on the supposition that EU students are likely to return home (during vacations) more often than non-EU students, due to the relative ease and low cost of transport²⁰. Moreover, we assume that all overseas postgraduate students (EU and non-EU) spend 52 weeks in the UK due to dissertations undertaken in the summer. There is some potential uncertainty around the assumptions relating to stay-durations and as such, we provide a sensitivity analysis later in the section to illustrate the impact on non-tuition fee expenditure of alternative assumptions.

Extending the 39 week academic year (September to June) expenditure figures to the assumed stay-durations above and inflating the 2007/08 value (£10,003) to 2008/09 prices

¹⁷ Academic year 2007/08 is September 2007 to June 2008.

¹⁸ Department for Education and Skills (DfES) *Student Income and Expenditure Survey 2004/05*

¹⁹ However, there may be significant variability in the number of weeks a non-UK student stays in the UK, depending on a number of factors such as country of origin, and parental income etc.

²⁰ We have assumed that non-EU students are considered more likely to go home for summer only, rather than for Christmas and Easter as well.

using the Consumer Price Index, our estimated 2008/09 average expenditure figures by type of overseas student are shown in Table 12.

Table 12: Average 'other expenditure' per full-time overseas student by type of student, 2007/08 and 2008/09

	Academic year (39 weeks) £	EU Undergraduate(3 9 weeks) £	Non-EU Undergraduate(4 2 weeks) £	EU/Non-EU Postgraduate (52 weeks) £
2004/05	9,123	9,123	9,825	12,164
2005/06	9,313	9,313	10,029	12,417
2006/07	9,725	9,725	10,473	12,967
2007/08	10,003	10,003	10,772	13,337
2008/09	10,304	10,304	11,097	13,739

Note: SIES surveys were only carried out in 2004/05 and 2007/08. Expenditure values in the intervening years have been interpolated on a straight line basis. The 2007/08 value was inflated forward to 2008/09 prices using the Consumer Price Index. Totals may not sum due to rounding.

Source: DIUS SIES 2007/08 report, London Economics (current prices)

In 2008/09, there were 305,855²¹ full-time students from outside the UK registered at UK Higher Education Institutions, of which 61,175 were EU undergraduates, 95,995 were non-EU undergraduates and 148,715 were postgraduates. Combining the information on the number of students, their level of study and the average non-tuition fee expenditure during their studies, the estimate of the gross non-tuition fee expenditure of overseas full-time students in 2008/09 was **£3,738.8 million**^{22 23}. The comparable figure for 2007/08 was **£3,296.2 million**^{24 25}.

Scholarships

We also need to take into account the fact that some overseas students come to the UK on UK-funded scholarships, such as the Commonwealth Scholarship scheme. This scheme also covers maintenance for such students, and since this money originates from the UK, it needs to be deducted from our estimate for overseas spending. The total amount spent on maintenance in 2007/08 was £5.8 million and £6.2 million in 2008/09. Therefore, overseas spending by non-UK domiciled full-time students net of maintenance scholarships (as opposed to tuition fee scholarships) was estimated to be **£3,290.4 million** in 2007/08 and **£3,732.6 million** in 2008/09. This information is presented in Table 13.

²¹ Table 0: All students by institution, mode of study, level of study and domicile, 2008/09, HESA.

²² This is the sum of: 148,715 multiplied by £17,861 (PG), 61,175 multiplied by £13,395 (EU) and 95,995 multiplied by £14,426.

²³ Note that changing the assumption in relation to the duration stay of undergraduate students by 1 week increases (decreases) the estimate of non-tuition fee expenditure by £63.75 million

²⁴ This is the sum of: 133,050 multiplied by £17,339 (PG), 57,360 multiplied by £ 13,004 (EU) and 88,000 multiplied by £14,004

²⁵ Based on 278,410 non-UK domiciled full-time students registered at UK Higher Education Institutions (57,360 EU undergraduates, 88,000 non-EU undergraduates and 133,050 postgraduates)

Using the same methodology as before, we have also backdated our estimates to 2004/05 (Table 13). For the 2005/06 estimate we use the SIES 2004/05 data and then inflate this figure forward to 2005/06 using the Consumer Price Index. On the other hand, for the 2006/07 figure, we use the 2007/08 SIES data by deflating the 2007/08 estimate using the Consumer Price Index.

Table 13: Time series of total non-tuition fee expenditure of full-time overseas students, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Gross non tuition fee expenditure	£2,594.1	£2,648.1	£3,239.1	£3,296.2	£3,738.8
Maintenance Scholarships	4.8	5.5	5.5	5.8	6.2
Net non tuition-fee expenditure (current prices)	£2,589.3	£2,642.5	£3,233.5	£3,290.4	£3,732.6
Net non tuition-fee expenditure (constant 2008/09 prices)	£2,844.4	£2,852.3	£3,407.6	£3,389.6	£3,732.6

Source: London Economics

Note: DIUS SIES 2007/08 report, DfES SIES 2004/05 report. Totals may not sum due to rounding.

Part time students

The estimates so far cover full-time students only. However, some overseas students, albeit a relatively small number, study part-time. Specifically, there were a total of 63,085 part-time Higher Education overseas students in 2008/09²⁶ and 63,380 in 2007/08²⁷.

To estimate total living expenses of undergraduate and postgraduate students, we have calculated the total annual expenditure of part time students using the same approach as for full-time students. However, rather than assuming that this expenditure is entirely funded from overseas, we have assumed that some part-time students work while studying, and the income generated is deducted from the estimate of the annual expenditure. We assume that this remaining expenditure is funded from outside the United Kingdom.

Given the fact that there is relatively little student support available to overseas students, it is likely that some part-time students will partially-fund their general living expenses through part-time work. EU domiciled students are entitled to work in the UK, while non-EU students may work part-time (up to 20 hours per week if studying a degree-level course) during the academic year. However, there is no information on the proportion of part-time students that work. It would be incorrect to assume that no part-time students work. Equally, it would be incorrect to assume that all part-time students work; so, in the absence of better information, we assume that half of all part-time (both EU and non-EU domiciled) students work. We further assume that those who do work complete the full 20 hours per week entitlement of non-EU students at the level of the adult national minimum

²⁶ 12,200 are EU undergraduates, 16,215 are non-EU undergraduates and 34,670 are postgraduates.

²⁷ Of which 12,505 are EU undergraduates, 16,440 are non-EU undergraduates and 34,435 are postgraduates

wage. Our calculation of the estimated average weekly income from employment in the UK for employed part-time students is presented in Table 14.

Table 14: Average weekly income from employment in the UK for employed part-time students (£), per student. 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Adult rate of national minimum wage (£)	4.85	5.05	5.35	5.52	5.73
Hours worked per week	20	20	20	20	20
Weekly income from employment in the UK (£)	97.00	101.00	107.00	110.40	114.60

Source: London Economics analysis based on data from The Low Pay Commission (www.lowpay.gov.uk)

Again assuming that on average, an EU undergraduate student spends 39 weeks in the UK, a non-EU undergraduate student spends 42 weeks in the UK and all overseas postgraduate students (EU and non-EU) spend 52 weeks in the UK, the average total annual income figures for employed part-time students are shown in Table 15.

Table 15: Average annual income from employment in the UK for employed part-time students (£), 2004/05 to 2008/09

	EU Undergraduate (39 weeks) £	Non-EU Undergraduate (42 weeks) £	EU/Non-EU Postgraduate (52 weeks) £
2004/05	3,783	4,074	5,044
2005/06	3,939	4,242	5,252
2006/07	4,173	4,494	5,564
2007/08	4,306	4,637	5,741
2008/09	4,469	4,813	5,959

Note: All calculations rounded to nearest pound.

Source: DIUS SIES 2007/08 report, London Economics

Based on quoted student numbers, assuming that half of all part-time (both EU and non-EU domiciled) students work and that the general living expenses of full-time and part-time students are equivalent (Table 12), and deducting the earned income generated by part time students from total expenditure, the **net** average total annual non-tuition fee expenditure funded from non-UK sources relating to part-time non-EU undergraduate and postgraduate students was estimated to be in **£612.4 million** 2008/09.

Table 16: Net average total non-tuition fee expenditure funded from non-UK sources by part-time overseas students, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Net non-tuition fee expenditure (current prices)	578.5	587.8	600.9	597.6	612.4
Net non-tuition fee expenditure (constant 2008/09 prices)	635.5	634.5	633.3	629.7	612.4

Note: In the absence of data on the number of part-time students by domicile and level, 2007/08 student numbers have been used for 2004/05 to 2006/07. Totals may not sum due to rounding.

Source: London Economics analysis

A very small proportion of part-time students may not be resident in the United Kingdom whilst enrolled (for example, those undertaking research degrees at postgraduate level) and any expenditure undertaken by these students will not result in increased export income for the United Kingdom. However, the impact of such students on the estimate is believed to be negligible so has been ignored.

Combining full-time and part-time student non-tuition fee expenditure

Combining the expenditure of full-time and part-time overseas students, the non-tuition fee expenditure generated from overseas is estimated to be **£4,344.9 million** in 2008/09 and **£3,888.1 million** in 2007/08. This is presented in Table 17.

Table 17: Time series of total non-tuition fee expenditure of all overseas students, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Net non-tuition fee expenditure (FT)	2,589.3	2,642.5	3,233.5	3,290.4	3,732.6
Net non-tuition fee expenditure (PT)	578.5	587.8	600.9	597.6	612.4
Net non tuition fee expenditure (All) (current prices)	3,167.7	3,230.4	3,834.5	3,888.1	4,344.9
Net non tuition fee expenditure (All) (constant 2008/09 prices)	3,479.9	3,486.8	4,040.9	4,097.4	4,344.9

Source: London Economics

Note: DIUS SIES 2007/08 report, DfES SIES 2004/05 report. Totals may not sum due to rounding.

Disaggregation by region

We have also been able to estimate the average other expenditure per full-time student by region as the Student Income and Expenditure Survey covers both English and Welsh Higher Education Institutions. Subtracting tuition fee expenditure from estimated total expenditure, we arrive at an average non-tuition fee expenditure of £10,020 for students attending English HEIs and £7,533 for those attending Welsh HEIs in 2007/08. Inflating up these estimates using the Consumer Price Index provides estimates of £10,265 and £7,717 for 2008/09 respectively.

Moreover, we can estimate the total other expenditure by overseas students by region. Of the £4.345 billion in expenditure by full-time and part-time students, the majority is from those studying in English HEIs (Table 18).

Table 18: Non-tuition fee expenditure from overseas students, by devolved administration, 2008/09

	Non-EU domicile £m	EU domicile £m	Non-EU and EU domicile £m
England	2,566.5	1,027.5	3,593.9
Wales	166.4	79.4	245.9
Scotland	294.3	146.8	441.0
Northern Ireland	22.0	42.1	64.1
Total UK	3,049.2	1,295.7	4,344.9

Note: These figures are gross of scholarships. Totals may not sum due to rounding.

Source: DIUS SIES 2007/08 report, DfES SIES 2004/05 report London Economics

Alternative approaches to calculating non-tuition fee expenditure – International Passenger Survey

An alternative approach to estimate aggregate other expenditure for overseas students is by using the International Passenger Survey (IPS) instead of SIES. Approximately 250,000 people entering and leaving the United Kingdom every year are interviewed in the IPS. Travellers are asked their purpose of travel and expenditure over the entire period spent in the UK. Given the fact that we are specifically interested in the spending patterns of Higher Education students, we focused on visitors that were in the United Kingdom for over 6 months for the purposes of study.

It is important to note that overseas students who study for more than one year in the United Kingdom, such as those studying for an undergraduate degree, will be classified as a UK resident in the IPS, rather than an Overseas Study visitor. Subsequently, the number of Overseas Study visitors estimated by the IPS will be a significant underestimate of the true number of overseas students in the UK. A second important caveat of the IPS is that this survey only records the number of 'visits' to the UK, rather than the number of visitors. Therefore, to generate an estimate, we need to assume that the number of visits is a proxy for the number of visitors, even though we are aware that often people will have more than one 'visit' to the UK on an annual basis, and so the number of visits is likely to be an overestimate of the number of people visiting.

Using the IPS we found that there were 71,119 Overseas Study visitors that were in the UK for between 3 months and 1 year, spending on average £43 per night. Of the total number, 35,372 were Overseas Study visitors from the European Union and 35,747 were from non-EU countries. We made the assumption that EU postgraduate and undergraduate students have the same daily expenditure (because the IPS does not separate Overseas Study visitors by level of study). The data suggested that an EU student spent approximately £32 a night²⁸. Therefore, using this data source, we have

²⁸ Calculated by dividing the total expenditure of EU Overseas Study visitors by the total number of nights spent in the UK by EU Overseas Study Visitors.

estimated that a representative EU undergraduate who stayed in the UK for 39 weeks spent approximately £8,700 in the UK and an average EU postgraduate who stayed in the UK for 52 weeks spent £11,632. Non-EU students spend an average of £51 per night of their stay, which equates to approximately £15,122 over 42 weeks for an undergraduate and £18,774 for a postgraduate.

Table 19: Comparison of average non-tuition fee expenditure per full-time overseas student by type of student, 2008/09

	EU Undergraduate (39 weeks) £	Non-EU Undergraduate (42 weeks) £	EU Postgraduate (52 weeks) £	Non-EU Postgraduate (52 weeks) £
SIES	10,003	11,097	13,739	
IPS	8,700	15,122	11,632	18,774

Note: Totals may not sum due to rounding.

Source: International Passenger Survey 2009, DIUS SIES 2007/08 report, London Economics

From HESA data we have calculated that in 2008/09, there were 305,885²⁹ full-time students from outside the UK registered at UK Higher Education Institutions, of which 61,175 were EU undergraduates, 95,995 were non-EU undergraduates and 148,715 were postgraduates. Therefore, adopting this approach (based on the International Passenger Survey), the total non-tuition fee expenditure of overseas students in 2008/09 was estimated to be **£4,555.0 million**³⁰.

In comparison with our estimates using the SIES data, the aggregate IPS estimate of expenditure by full time students from overseas was approximately £200 million higher than the estimate based on SIES and HESA data, which is primarily driven by the fact that the IPS data estimates that Non-EU undergraduates and postgraduates spent between £4,000 and £5,000 more than according to the SIES estimate. These differences are also due to the caveats mentioned above, such as students on courses longer than one year being excluded from the sample. These limitations to the International Passenger Survey data lead us to believe that the SIES estimate is more robust than the IPS figure.

Alternative evidence on student expenditure

To further gauge how robust our estimate is, we also consider similar estimates from a number of other sources.

²⁹ Table 0: All students by institution, mode of study, level of study and domicile, 2008/09, HESA

³⁰ This is the addition of 44,285 multiplied by £11,632, plus 139,095 multiplied by £18,774, plus 69,865 multiplied by £8,700, plus 104,445 multiplied by £15,122

Universities UK (2009)

An alternative estimate from Universities UK³¹ suggests that the aggregate off-campus expenditure for overseas students studying in the UK was approximately £2.3 billion³² (£6,801 per capita) in 2007/08³³ (equivalent to £2.4 billion in 2008/09 prices). As with our approach, the calculation is based on the most recent SIES data (2007/08) and makes the assumption that overseas students spend similar amounts to domestic students. However, in contrast to our approach, the authors deducted expenditure on catering, residence charges and other items from total non-tuition fee, yielding an estimate of off-campus expenditure. As our estimate includes on- and off-campus expenditure (on-campus rent and catering are not valued elsewhere), the Universities UK expenditure estimate per capita will be considerably lower than our estimate.

Higher Education Policy Institute (2007)

The Higher Education Policy Institute (HEPI) has also estimated non-tuition fee expenditure. In 2004/05, they estimated that the aggregate expenditure of undergraduate and postgraduate overseas students was £2.562 billion³⁴, based on per capita estimates of £6,537 for undergraduate overseas students and £9,442 for postgraduate students. These figures are significantly lower than the ones presented here, which could be due to a number of reasons. The estimates from HEPI use data from the UNITE Student Experience Report 2006, which states that overseas students are likely to spend less than domestic students as overseas students tend to spend less on a number of goods and services (such as alcohol)³⁵. Moreover, HEPI make different assumptions on duration of stay. They assume that overseas students stay in the UK for 36 weeks a year because undergraduate overseas students are likely to go home for summer and Christmas holidays. However, we assume that EU undergraduates spend 39 weeks in the United Kingdom, while non-EU undergraduates spend 42 weeks and EU/non-EU postgraduates spend 52 weeks per year in the UK. Another reason why our estimates are significantly higher than those produced by HEPI is that there are now approximately 50,000 more overseas students studying in the UK than there were in 2004/05.

Adjusting the HEPI estimates for the greater student population would increase the estimate of non-tuition fee expenditure by approximately £400 million to approximately £2.962 billion, which is equivalent to approximately £3.254 billion in 2008/09 prices (approximately 33% less than London Economics' estimate).

³¹ Kelly, U., McLellan, D. and McNicoll, I. (2009) *The impact of universities on the UK economy 4th Report, Universities UK*

³² There were 341,810 students registered outside the UK at UK institutions in 2007/08. This gives a per capita expenditure of approximately £6,729

³³ Universities UK economic impact modelling system (2009)

³⁴ Equivalent to £2.814 billion in 2008/09 prices

³⁵ UNITE International Student Experience Report.

Lenton (2007)

Lenton (2007) produced an estimate of the non-tuition fee expenditure of £2.955 billion³⁶ for 2003/04 (in 2008/09 prices). This estimate is lower than the one presented here, despite a broadly similar methodology.

One structural reason for the difference in the estimates relates to the number of overseas students studying in the UK, which, as with the HEPI analysis, modelled the non-tuition fee expenditure based on a much smaller number of overseas students compared to the number currently studying in the United Kingdom. However, our methodology to estimate the value of other expenditure by overseas students does differ slightly from that of Lenton (2007) in respect of the duration of stay. Lenton (2007) assumes that EU and non-EU students spend 30 and 52 weeks in the UK, respectively. First, we believe the former assumption (EU students) to be an underestimate of total duration of stay. Whilst we acknowledge the ease of EU students to return home frequently, we still believe 30 weeks to be too short a period as it assumes all EU students leave the UK for every holiday between academic terms. Second, we believe the latter assumption (non-EU students) to be an overestimate as it implies that non-EU undergraduate students do not leave the UK at all during a calendar year. We consider it unlikely that students will stay in the UK for the entirety of non-term time, particularly over the extended summer break. Rather, we assume that EU students spend 39 weeks and non-EU students spend 42 weeks in the United Kingdom during the year. We do, however, agree with Lenton's 52-week assumption in relation to postgraduate students. The various assumptions relating to stay duration are summarised below.

Table 20: Comparison of assumptions relating to full-time overseas student stay duration by type of student, 2008/09

	EU Undergraduate (weeks)	Non-EU Undergraduate (weeks)	EU Postgraduate (weeks)	Non-EU Postgraduate (weeks)
LE (2010)	39	42	52	
HEPI (2007)	36	36	36	
Lenton (2007)	30	52	30	52

Source: London Economics

Transnational education (HE)

Transnational education refers to education provision where students are based (domiciled and resident) in a country other than that in which the awarding institution is based. For the purposes of the current exercise, this means students based overseas studying for UK education qualifications. Transnational education is classed as a UK educational export as the UK-based awarding institutions receive a part of the tuition fees paid by the overseas students to the overseas institution, providing a flow of income into the UK economy. Examples of transnational education include distance learning and studying at an overseas campus of a UK Higher Education Institution (HEI).

³⁶ Equivalent to £11,195 per capita

The UK Higher Education International Unit provides a summary of data sourced from HESA Students studying wholly overseas (2010) on transnational education provided by UK Higher Education institutions in 2008/09. The total number of students studying the whole of their Higher Education qualification outside the United Kingdom is 388,135.

Table 21: Transnational education provided by UK Higher Education Institutions, 2008/09

	Number of students	Proportion of all TNE students
Total	388,135	100.0%
Type of provision		
Overseas campus of reporting HEI	9,885	2.5%
Other arrangement including collaborative provision	68,595	17.7%
Distance, flexible or distributed learning	112,385	29.0%
Overseas partner organisation	197,205	50.8%
Other arrangement including collaborative provision	65	0.0%
Level of study		
Postgraduate research	1,895	0.5%
Postgraduate taught	72,290	18.6%
First degree	301,700	77.7%
Other undergraduate	12,085	3.1%
Further Education	170	0.0%
Location of provision		
European Union	66,815	17.2%
Non-European Union	321,325	82.8%

Source: UK Higher Education International Unit, data from HESA 2010, Students studying wholly overseas

We do not currently have enough information to estimate the value of transnational education provided by UK Higher Education institutions based on secondary data as we are missing information relating to the income by student type, degree programme or mode of delivery devolved to the UK Higher Education institution.

However, the interim results of the bespoke survey of Higher Education Institutions registered as Tier 4 sponsors provide some indicative figures. HEIs were questioned about the total income that they earn from transnational education. These responses are summarised, along with the number of responses they relate to, in Table 22.

Assuming that these estimates are representative of the sector as a whole, and grossing these estimates to reflect the total number of Higher Education institutions in the United Kingdom, the analysis indicates that the total value of transnational education stood at approximately **£210.8 million** in 2008/09 and **£210.9 million** in 2007/08, which equates to approximately £543 per student (based on the information presented in Table 21).

Table 22: Summary of survey responses: Higher Education institutions – TNE, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Total income from TNE (£m) <i>(number of respondents)</i>	18.474 (16)	18.428 (16)	20.581 (17)	21.726 (17)	22.996 (18)
Total income from TNE per institution (£m)	1.155	1.152	1.211	1.278	1.278
Total income from TNE – all institutions (£m) (current prices)	190.5	190.0	199.8	210.9	210.8
Total income from TNE – all institutions (£m) (constant 2008/09 prices)	211.0	206.0	211.6	216.9	210.8

Note: Totals may not sum due to rounding.

Source: London Economics' survey of UK Border Agency Tier 4 (students) sponsors

Income from research grants and contracts

Higher Education Institutions also receive income from overseas sources through research grants and contracts. The HESA definition of income from research grants and contracts is '...all income in respect of externally sponsored research carried out by the institution or its subsidiary undertaking for which directly related expenditure has been incurred'.

Figures supplied by the Higher Education Statistics Agency (HESA), via 2008/09 HE Finance Plus, reveal an export income for the UK in 2008/09 from research grants and contracts of **£647.9 million**. This figure includes income for academic departments, services, and administration and central services. This is presented below in aggregate and broken down by Devolved Administration. This amount agrees exactly with an ONS value of £648 million for Research & Development (R&D) performed in the UK by HEIs and funded from overseas in 2008.³⁷

Table 23: Research grants and contracts from non-UK sources 2008/09, by region

Region of UK HEI	Amount received in research grants and contracts from Non-UK sources (£m)
England	543.3
Wales	19.7
Scotland	68.4
Northern Ireland	16.5
Total UK	647.9

Note: Totals may not sum due to rounding.

Source: Table 5b – Research grants and contracts – breakdown of income by institution, cost centre and source, 2008/09 (£ thousands) HE Finance Plus

³⁷ ONS (2010) *R&D performed in the UK in each sector according to source of finance*, Time series data. Available from: <http://www.statistics.gov.uk/statbase/tsdataset.asp?vlnk=584&More=Y>.

The estimates for previous years are shown in Table 24.

Table 24: Time series of income received in research grants and contracts, 2005/06 to 2008/09

Year	Amount received in research grants and contracts from Non-UK sources (£m)
2004/05	387.8
2005/06	431.2
2006/07	503.1
2007/08	548.4
2008/09	647.9

Source: HE Finance Plus 2005/06 to 2008/09, HE-BCI survey 2005/06 and 2006/07

Lenton (2007) produced an estimate for 2003/04 of £603.4 million³⁸, using data from HESA on research grants and contracts alongside estimates from two Universities UK reports³⁹. This estimate also includes income from overseas alumni and international charitable contributions, which we separate into the section below. We believe our estimate to be more robust because it is derived in its entirety from HE Finance Plus 2008/09⁴⁰, rather than adjusting past estimates from other research work.

Income from licensing intellectual property

Income from overseas sources could also originate from the licensing of intellectual property of new technologies or the sale of shares in spin-off companies derived from Higher Education Institutions.

The *Higher Education-Business and Community Interaction* survey (HE-BCI) provides data on the total (domestic and international) income from Intellectual Property (IP). The total income from Intellectual Property includes the revenue from IP and the sale of shares in spin-offs totalled £124.4 million in 2008/09 (Table 25). *Time series information from 2004/05 is presented in Table 26.*

³⁸ Adjusted to 2008/09 prices using CPI

³⁹ Patterns of Higher Education Institutions in the UK, fifth edition, Professor Brian Ramsden and The impact of universities on the UK economy, Kelly, Marsh and McNicholl. The estimates were adjusted for inflation.

⁴⁰ Data on export income from services and administration and central services was not available to Lenton through HESA data. Instead she got these estimates from the two Universities UK papers above.

Table 25: Income from licensing intellectual property

	2007/08	2008/09
	£m	£m
Total revenue from IP	45.5	56.5
Total income from sales of share of spin-offs	20.8	67.9
Total from IP	66.3	124.4

Note: the large increase from 2007/08 to 2008/09 is mainly due to the fact that there was a large sale in shares of spin-offs in 2008/09 (67,885) compared to a smaller sale in previous years (around 20,000). Totals may not sum due to rounding.

Source: HE-BCI Survey, Section B UK Sector figures for Table 4d Spin-off and start-up activity, Section B UK Sector figures for Table 4c

Table 26: Time series of income from IP, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Total from IP	56.97	57.9	58.4	66.3	124.4

Note: the large increase from 2007/08 to 2008/09 is mainly due to the fact that there was a large sale in shares of spin-offs in 2008/09 (67,885) compared to a smaller sale in previous years (around 20,000)

Source: HE-BCI Surveys 2004-05 to 2008/09 (from 2007/08, the HE-BCI survey is in HE Finance Plus)

However, this figure may be an overestimate of the export income from sales of shares in spin-offs and licensing Intellectual Property, because we do not know what proportion of this income was generated from sales or licensing overseas. To estimate the proportion occurring overseas, we use the proportion of total of UK economy R&D output that was exported in 2008 (as an education-specific R&D export rate is unavailable).

Using a combination of National Accounts Supply Use tables (SuT) data and ITIS micro-data (the dominant source of R&D exports of services data), we know that R&D exports in 2008 totalled £6,081 million, with 55% (£3,345 million) exported by the R&D sector (as opposed to manufacturing and other services industries). Expressed as a proportion of total output (revenue) of the R&D sector in 2008 (£8,918 million), this provides an export rate of 0.375. Applied to total income from sales of shares in spin-offs and IP, this implies that approximately **£46.6 million** of the £124.4 million gross income was generated from an overseas source, though clearly there is some uncertainty in relation to the robustness of this approximation. The historical time series of estimates are presented in Table 27.

Table 27: Time series of estimated overseas income from IP, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Total from IP (current prices)	21.4	21.7	21.9	24.9	46.6
Total from IP (constant 2008/09 prices)	23.5	23.4	23.1	25.6	46.6

Source: HE-BCI Surveys 2004-05 to 2008/09 (from 2007/08, the HE-BCI survey is in HE Finance Plus)

Lenton (2007) did not include estimates of the sales of shares in spin-offs or Intellectual Property in her value of educational exports.

Income from consultancy contracts, facilities and equipment

Another source of income for Higher Education Institutions is from consultancy contracts, facilities and equipment services. Consultancy contracts differ from research contracts because consultancy is defined as 'the provision of expert advice and work', whereas research contracts are related to externally sponsored research.

The Higher Education-Business and Community Interaction survey (HE-BCI) provides data on the value of consultancy contracts, facilities and equipment from SMEs⁴¹, non-SME commercial businesses and non-commercial organisations. The total income to HEI's from consultancy contracts was £331.7 million in 2008/09 and £327.6 million in 2007/08 respectively. For facilities and equipment, the comparable figures were £110.3 million and £103.7 million.

Table 28: Income from consultancy contracts, facilities and equipment

	2004/05	2005/06	2006/07	2007/08	2008/09
Income from consultancy contracts	219.0	241.98	287.8	327.6	331.7
Income from facilities and equipment	75.7	89.7	92.8	103.7	110.3
Total	294.7	331.7	380.6	431.2	442.0

Note: The total figure for 2007/08 is calculated from $327.572 + 103.657 = 431.229$. Totals may not sum due to rounding.

Source: HE-BCI survey 2005/06 – 2008/09

However, these figures may be an overestimate of the export income from consultancy contracts and facilities and equipment, because again we do not know precisely what

⁴¹ SMEs are classified as made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding €50 million, and/or an annual balance sheet total not exceeding €43 million. SMEs include micro, small and medium enterprises, and sole traders.' General guidance on Table 2: Business and community services, HE-BCI, HESA

proportion of this income was generated from overseas. To estimate the proportion occurring overseas, we use the proportion of total of UK economy 'Other business services'⁴² output that was exported in 2008 (as an education-specific consultancy export rate is unavailable). Using the National Accounts SuT data, we know that 'Other business services' exports in 2008 totalled £43,115 million. Expressed as a proportion of total output (revenue) of the 'Other business services' sector in 2008 (£224,452 million), we can calculate an export rate of 0.192. Applied to total income, this implies that approximately £84.9 million of the £442.0 million income was from an overseas source, though again there is some uncertainty in relation to the robustness of this approximation. The historical time series of estimates are presented in Table 29.

Table 29: Time series of estimated overseas income from consultancy, facilities and equipment, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Total from consultancy, facilities and equipment (current prices)	56.6	63.7	73.1	82.8	84.9
Total from consultancy, facilities and equipment (constant 2008/09 prices)	62.1	68.7	77.0	85.3	84.9

Source: London Economics analysis

Lenton (2007) did not include estimates of income from consultancy contracts, facilities and equipment in her value of educational exports.

Income from overseas alumni, international charitable organisations

In addition to income from research grants, contracts and collaborations (funds received in return for a specific research output), Higher Education Institutions also receive charitable donations – funds received without being conditional on a specific output – from a number of sources, including overseas alumni and international charitable organisations.

No existing data source provides information on the charitable donations received by Higher Education Institutions. However, respondents to our survey of Tier 4 sponsors were questioned as to the level of such charitable income received from an overseas source. The aggregate of all responses, and the number of responses on which the total is based, are presented in Table 30. It should be noted that the number of responses includes all completed responses, including where zero was specified⁴³.

⁴² Other business services are non-computer and non-R&D business services

⁴³ Respondents were instructed to only insert "0" to indicate zero (i.e. meaning no income, no students or no investment, as applicable).

Table 30: Summary of survey responses: Higher Education institutions – Income from overseas alumni, international charitable organisations, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Total income from charitable donations <i>(number of respondents)</i>	2.1 (14)	3.4 (14)	2.8 (14)	6.1 (14)	2.9 (14)

Source: London Economics survey of UK Border Agency Tier 4 (students) sponsors

With completed responses from only a small number (14) of Higher Education Institutions, we have the choice of either taking the aggregate of response values as the known minimum valuation (lower bound estimate), or to gross-up the response values to include all HEIs. As the response rate is low, the known minimum valuation is very likely to be an underestimate of the true aggregate value. The risk of grossing-up is that it is not possible to measure how representative the sample responses are of the entire HEI population. However, we consider that assuming the responses to be representative is a lesser risk than the risk of substantially underestimating the value by using a lower bound estimate.

Therefore, assuming the completed responses to be representative of the population of all 165 HEIs in the United Kingdom, the effective average of £209,000 per survey respondent implies a total estimated value of £34.5 million for UK HEI income from overseas alumni and international charitable organisations in 2008/09 and **£72.2 million** in 2007/08.

Other sources of income from overseas

Higher Education Institutions responding to questions on each of the above income sources were also questioned as to any income that they earn from an overseas source that is not covered by the above sections. The responses are summarised, along with the number of responses they relate to, in Table 36. It is clear from the survey responses that the income from other overseas sources is of a very small magnitude.

Table 31: Summary of survey responses: Higher Education institutions – Other sources, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Total income from other overseas sources (£ m) <i>(number of respondents)</i>	15.5 (14)	2.7 (14)	6.2 (14)	5.1 (14)	5.6 (15)

Source: London Economics survey of UK Border Agency Tier 4 (students) sponsors

Again, assuming the completed responses to be representative of the population of all 165 HEIs in the United Kingdom, the effective average of £373,000 per survey respondent implies a total estimated value of **£61.6 million** for UK HEI income other overseas sources in 2008/09 and **£60.1 million** in 2007/08.

Summary of Higher Education exports

Based on the detailed examination of the individual components of Higher Education activity, the total value of UK education exports generated by UK Higher Education

institutions is presented in Table 32. The total aggregate value of education exports generated by UK Higher Education institutions stood at **£7,873.5 million** in 2008/09.

The largest component of these education exports was not associated with tuition fee income (31.0%), but actually related to the non tuition fee expenditure undertaken by overseas students while studying in the United Kingdom. This element accounted for approximately 55.2% of the total export value. The next largest component related to research grants and collaborations (8.2%). Transnational education and income from charitable sources, alumni and other sources overseas accounted for approximately 1.2% of export value in the sector, while the licensing of intellectual property rights generated approximately 0.6% of exports. The supply of consulting, facilities and equipment contributed 1.1% of total export income.

Table 32: Total export income generated by UK Higher Education institutions (current prices), 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Tuition fee income net of scholarships	1,720.1	1,760.5	1,985.0	2,145.3	2,442.3
Net non tuition fee expenditure (all)	3,167.7	3,230.3	3,834.5	3,888.1	4,344.9
Transnational Education (TNE)	190.5	190.0	199.8	210.9	210.8
Research grants and contracts	387.8	431.2	503.1	548.4	647.9
IP licensing	21.4	21.7	21.9	24.9	46.6
Consulting, facilities and equipment	56.6	63.7	73.1	82.8	84.9
Income from charitable donations	24.7	39.9	33.3	72.2	34.5
Income from other sources	182.7	31.8	73.1	60.1	61.6
Total	5,751.5	5,769.1	6,723.8	7,032.7	7,873.5

Source: London Economics. Totals may not sum due to rounding.

This information is presented in 2008/09 prices in Table 33.

Table 33: Total export income generated by UK Higher Education institutions (constant 2008/09 prices), 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Tuition fee income net of scholarships	1,905.1	1,908.4	2,102.9	2,206.7	2,442.3
Net non tuition fee expenditure (all)	3,479.9	3,486.8	4,040.9	4,097.4	4,344.9
Transnational Education (TNE)	211.0	206.0	211.6	216.9	210.8
Research grants and contracts	426.0	465.4	530.1	564.9	647.9
IP licensing	23.5	23.4	23.1	25.6	46.6
Consulting, facilities and equipment	62.1	68.7	77.0	85.3	84.9
Income from charitable donations	27.4	43.3	35.3	74.3	34.5
Income from other sources	202.4	34.5	77.4	61.8	61.6
Total	6,337.4	6,236.5	7,098.3	7,332.9	7,873.5

Source: London Economics. Totals may not sum due to rounding.

Further Education

Tuition fees

Data on the number of overseas students studying at UK Further Education Colleges has been provided to us by the British Council (Table 34). In 2008/09, 77,165 overseas students studied at UK Further Education Colleges, with the majority (66,705) studying in England. Over time, there has been a gradual decrease in demand from overseas students to 2007/08 followed by a slight increase to 2008/09.

Table 34: Time series of overseas students at UK Further Education colleges, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
England	76,920	75,905	73,460	66,380	66,705
Scotland	5,060	5,585	5,565	5,475	5,275
Wales	1,190	1,215	1,045	830	860
Northern Ire.	4,675	4,475	4,270	4,105	4,330
Total UK	87,845	87,175	84,340	76,785	77,165

Source: LSC (2010); Scottish Funding Council (SFC) (2010); DELNI, FESR (2010); LLWR (Lifelong Learning Wales Record) 18 March 2010

There are a number of different sources for the value of tuition fees paid by overseas students for FE courses. Firstly, the Association of Colleges (AoC), which represents 97% of the 386 FE colleges in England, Wales and Northern Ireland, undertook an overseas student recruitment survey of colleges. The survey found that in 2007/08, the average tuition charged to overseas students was just under £5,000 (equivalent to £5,151 in 2008/09 prices).

Another source of information on tuition fee income derives from the London Economics' survey of Tier 4 sponsors. The survey responses indicate that in 2008/09, the average tuition fee income per student was £5,028 (Table 35, calculated as the average reported tuition fee income divided by the average reported number of students).

Table 35: Summary of survey responses: Further Education institutions – Tuition fees, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Students registered <i>(no. of respondents)</i>	4,655 (28)	4,940 (27)	5,811 (30)	7,062 (31)	8,897 (33)
Tuition fee income from all non-UK (£m) <i>(no. of respondents)</i>	13.22 (20)	15.20 (19)	19.33 (22)	25.16 (23)	33.89 (25)

Source: London Economics survey of UK Border Agency Tier 4 (students) sponsors

In contrast, for overseas students in the SIES 2007/08 survey, the information collected indicated that the *effective* average tuition-fee paid by students from an overseas source attending FE colleges was £1,707⁴⁴.

⁴⁴ This only takes into account those studying a bachelor's degree, a HND/HNC or a PGCE.

However, the AoC and London Economics' estimates do not take into account the proportion of the tuition fee charged derived from an overseas source. From the *Infact* database, which covers Scotland only, it can be seen that 26% of EU FE students paid for their course using a non-UK income source, while approximately 63% of overseas students paid for their course with funds from outside the UK.

Assuming these proportions are representative of the whole of the UK, we can estimate the proportion of the average tuition fee generated from overseas. If we take the average of the AoC and London Economics' tuition fee estimates (£5,090) and multiply this by the relevant proportion of tuition fee sourced from overseas (26% and 63%), and assuming an 48:52 split between EU and non-EU students, we calculate the estimate of tuition fee income derived from non-UK sources to be £2,228 (excluding any fee waivers or fee remission). We believe there to be reasonable consistency in the estimates of average tuition fee paid from overseas sources and the estimated derived from the Student Income and Expenditure Survey. Using the SIES estimate (£1,707), and assuming that there were 77,165 overseas students in UK FE colleges, we have estimated that tuition fee income from overseas students was **£138.6 million** In 2008/09, though this may underestimate the true fee income generated by the sector.

Using this approach, we have presented the historical series of tuition fee income generated by Further Education Colleges over the last 5 years, which is presented in Table 36.

Table 36: Time series of total tuition fee income from overseas FE students, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Number of students	87,845	87,175	84,340	76,785	77,165
Average tuition fee (net of waivers) (£)	1,599	1,639	1,678	1,707	1,797
Tuition fee income (£m) (current prices)	140.5	142.8	141.5	131.1	138.6
Tuition fee income (£m) (constant 2008/09 prices)	155.6	154.8	149.9	134.9	138.6

Source: London Economics survey of UK Border Agency Tier 4 (students) sponsors.

In the previous work undertaken by Lenton (2007), using information from the Association of Colleges, she found that the income from tuition fees of overseas students totalled £46.2 million. This is a significantly lower estimate that was based on the Association of Colleges assumption that there were no more than 15,000 overseas students in FE colleges in the United Kingdom. In addition to the analysis based on the Association of Colleges, Lenton did produce an estimate for tuition fee income of £49.6 million in 2002/03 and £51.2 million in 2003/04 using data from the ILR on student numbers (which were more similar to the numbers we have used in our estimate). However, her estimates remain lower than ours primarily because Lenton assumed that the average amount paid per course by fee-paying students (based on an average of the recorded fees paid in the Individualised Learner Record database) was approximately £450 per annum, whereas based on the evidence presented by the Association of Colleges and survey data collected directly from FE Colleges, we have assumed that the average tuition fee was substantially higher than this estimate.

Other spending of FE overseas students in the UK

In addition to tuition fees, overseas students also pay for accommodation and other day-to-day expenses incurred in the UK over the duration of their study. There is no data available on the non-tuition fee expenditure of Further Education (FE) overseas students whilst in the United Kingdom. Therefore, we use the data from SIES, as before.

We use data from the SIES report on the non-tuition fee expenditure of UK-domiciled students studying at FE Colleges. However, this estimate only takes into account those students studying either a bachelor's degree, a HND/HNC or a PGCE and omits those studying for shorter courses (which may overestimate the actual non-tuition fee expenditure taking place). Assuming that the level and pattern of expenditure by non-UK domiciled students is similar to English domiciled students, we use this as a basis to estimate the other spending of overseas FE students in the UK. It is important to note that the estimated total expenditure of a student at an English FE college is slightly more than for those attending an English HE institution. From the 2007 SIES, the estimated total expenditure (including expenditure on tuition fees) for a student attending an English HEI stands at £12,254 while for a student attending an English FE College, the equivalent estimate stands at £13,531 per annum⁴⁵. From SIES, we have estimated that the average tuition fee paid by overseas students attending FE Colleges stands at £1,707⁴⁶. This provides an estimate of the non-tuition fee expenditure of overseas students in FE Colleges of £11,824. As with the analysis of non-tuition fee expenditure in Higher Education institutions (and given the comparability of the qualifications being considered), we have adjusted this estimate of the non-tuition fee expenditure based on the assumption that these overseas students would spend approximately 36 weeks⁴⁷ in the United Kingdom per annum. Based on these assumptions, we estimate the non-tuition fee expenditure from overseas students to be **£838.1 million** in 2007/08 and **£867.6 million** in 2008/09.

As previously mentioned, we assume that FE students spend, on average, 36 weeks in the UK. In 2007/08, there were 76,785 students from outside the UK studying at FE colleges compared to 77,165 in 2008/09. As with students participating in higher education, an adjustment should be made to reflect the proportion of students in part time education that might also be working. However, there is no reliable information on the number of students that might be working and studying simultaneously. We have not adjusted the estimate of non-tuition fee expenditure downwards so the estimate presented may be a marginal

⁴⁵ The authors of the DIUS SIES 2007/08 report note that this is because those in FE colleges relied considerably more on income from paid work and considerably less on contributions from family and friends. This could be one of the reasons why the non-tuition fee expenditure students going to English FE Colleges is higher than those attending HE Institutions.

⁴⁶ This figure is the mean tuition fee paid by full-time students studying at FE Colleges in England, as taken from the SIES survey 2007/08. The difference between this figure and the estimated £5,000 figure by the AoC may be because the SIES survey only covers English FE colleges and students that are studying a bachelors degree, HND/HNC or a PGCE, whereas the AoC survey covers FE colleges from Northern Ireland and Wales as well and a greater range of courses.

⁴⁷ If this was 37 weeks instead of 36 weeks, it would add an extra £23.3 million to the total value of educational exports in 2007/08 and £24.1 million to the total in 2008/09

overestimate of the true non-tuition fee expenditure undertaken by students in Further Education⁴⁸.

Table 37: Total non-tuition fee expenditure by overseas FE students, 2007/08 and 2008/09

	2007/08	2008/09
Number of overseas students	76,785	77,165
Overall expenditure (£m)	£838.1	£867.6

Note: We have assumed that the average overseas FE student spends 36 weeks per year in the UK. This is to take into account the fact that some courses are very short, whilst others are one year long. The 2008/09 figures are CPI inflated 2007/08 figures but also take into account the difference in the number of overseas students. Totals may not sum due to rounding.

Source: AoC overseas student recruitment in colleges, summer 2009

By deflating the effective average non-tuition fee expenditure by FE students in 2007/08 (£10,914) using the Consumer Price Index combined with the number of overseas FE students studying in the UK (Table 36), it is possible to backfill the time series of estimated total non-tuition fee expenditure by overseas FE students, which is presented in Table 38.

Table 38: Time series of non-tuition fee expenditure by overseas FE students, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Number of students	87,845	87,175	84,340	76,785	77,165
Average non-tuition fee expenditure (£)	9,009	9,196	9,401	1,0,914	11,243
Total non-tuition fee expenditure (£m) (current prices)	791.4	801.7	792.9	838.1	867.6
Total non-tuition fee expenditure (£m) (constant 2008/09 prices)	869.4	865.3	835.6	863.3	867.6

Source: London Economics. Totals may not sum due to rounding errors.

In comparison, Lenton (2007) produced estimates of £528.3 million for 2002/03 and £555.5 million for 2003/04 (in 2008/09 prices), which is driven by the different methodological assumptions relating to the duration of stay of overseas students in Further Education.

⁴⁸ We have undertaken a sensitivity analysis of this assumption. If we assume that 10% of FE students are working along the same lines as presented for full time students (i.e. 20 hours per week at the National Minimum Wage), this will reduce the value of educational export by approximately £54.9 million in 2008/09. Of all FE students (irrespective of their age and whether they are Home or overseas students), approximately 34% are undertaking FE courses on a part time basis. We believe this proportion to be significantly lower for overseas students compared to Home students. Therefore, we believe that the estimate presented in the baseline scenario (no overseas part time students working) may be higher than the actual value of non-tuition fee expenditure by FE students, but not substantially so.

Transnational education (FE)

Data on the extent of transnational education undertaken by Further Education Colleges is very sparse. However, the summary of data on transnational education in 2008/09 published by the UK Higher Education International Unit provides data showing the total number of students studying Further Education in an HEI outside the UK is 170.

However, from the survey of Further Education Colleges, it is possible to generate some idea in relation to the value of transnational education. The responses are summarised, along with the number of responses they relate to in Table 39. The survey information indicates that the average income from transnational education generated by the respondent FE Colleges stood at £62,391 in 2008/09, which equates to approximately **£26.8 million** assuming survey respondents are representative of the wider sector (and **£30.1 million** in 2007/08).

Table 39: Summary of survey responses and value of TNE: Further Education institutions, 2004/05 to 2008/09

	2004/ 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09
Total income from TNE – survey (£m) (no. of respondents)	1.075 (18)	1.1 (18)	1.13 (19)	1.545 (22)	1.435 (23)
Total income from TNE - per institution (£m)	0.059	0.061	0.059	0.070	0.062
Total income from TNE – entire sector (£m) (current prices)	25.6	26.2	25.5	30.1	26.8
Total income from TNE – entire sector (£m) (constant 2008/09 prices)	28.4	28.4	27.0	31.0	26.8

Source: London Economics survey of UK Border Agency Tier 4 (students) sponsors

Other sources of income from overseas

Further Education Colleges responding to questions on each of the above income sources were also questioned as to any income that they earn from an overseas source that is not covered by the above sections. The responses are summarised, along with the number of responses they relate to, in Table 40. As is clear from the responses, income from other overseas sources is very small.

Table 40: Summary of survey responses: Further Education institutions – Other sources, 2004/05 to 2008/09

	2004/ 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09
Total income from other OS sources (£m) (no. of respondents)	1.72 (21)	1.8 (20)	2.0 (21)	2.0 (23)	2.0 (23)

Source: London Economics survey of UK Border Agency Tier 4 (students) sponsors

Again, assuming the completed responses to be representative of the population of all 429 FE Colleges in the United Kingdom, the effective average of £0.087 million per survey respondent implies a total estimated value of **£37.3 million** for UK FE income from overseas alumni and international charitable organisations in 2008/09 and **£37.3 million** in 2007/08.

Summary of export income in Further Education

Based on the detailed examination of the individual components of Further Education activity, the total value of UK education exports generated by UK Further Education Colleges is presented in Table 41. The total aggregate value of education exports generated by UK Further Education Colleges stood at **£1,070.3 million** in 2008/09.

As with Higher Education, the largest component of education exports was not associated with tuition fee income, but related to the non-tuition fee expenditure undertaken by overseas students while studying in the United Kingdom. This element accounted for approximately 81.1% of export value. The next largest component related to tuition fee income (13.0%) while transnational education and income from other sources overseas accounted for approximately 5.8% of export value in the sector.

Table 41: Total export income generated by UK FE Colleges (current prices), 2004/05 to 2008/09

	2004/05 £m	2005/06 £m	2006/07 £m	2007/08 £m	2008/09 £m
Tuition fee income (£m)	140.5	142.8	141.5	131.1	138.6
Net non-tuition fee expenditure	791.4	801.7	792.9	838.1	867.6
Transnational Education (TNE)	25.6	26.2	25.5	30.1	26.8
Income from other sources	35.1	38.6	40.9	37.3	37.3
Total	992.6	1,009.3	1,000.8	1,036.6	1,070.3

Source: London Economics. Totals may not sum due to rounding.

This information is presented in 2008/09 prices in Table 42.

Table 42: Total export income generated by UK FE Colleges (constant 2008/09 prices), 2004/05 to 2008/09

	2004/05 £m	2005/06 £m	2006/07 £m	2007/08 £m	2008/09 £m
Tuition fee income (£m)	155.6	154.8	149.9	134.9	138.6
Net non-tuition fee expenditure	869.4	865.3	835.6	863.3	867.6
Transnational Education (TNE)	28.4	28.4	27.0	31.0	26.8
Income from other sources	38.9	41.8	43.3	38.4	37.3
Total (2008/09 prices)	1,092.3	1,090.3	1,055.8	1,067.6	1,070.3

Source: London Economics (2008/09 prices). Totals may not sum due to rounding.

English language training

The main accreditation body of English language training schools in the UK is the Accreditation UK scheme, run jointly by the British Council and English UK.

There are approximately 532 English language training schools accredited by Accreditation UK. However, 88 of the 532 are not privately operated and operate as part of either Higher Education Institutions or Further Education Colleges. As the income from tuition and other income from these HE/FE activities are already captured in sections 2.2

and 2.3 of this report, these centres are removed here to prevent double-counting the income. This leaves 444 accredited privately run English Language schools, which is about 85% of all accredited centres. In addition, English UK estimates there to be some 390 privately operated non-accredited English Language schools in addition to the 444 privately operated accredited institutions. This implies that there are approximately 834 privately operated accredited and non-accredited English language schools across the UK.

The survey of UK Border Agency Tier 4 sponsors questioned English Language training institution respondents in relation to the total number of non-UK domiciled students registered (excluding those who study in a country outside of the UK, known as transnational education); the average duration (in weeks) of language training courses attended and the total language training or tuition fee income (£ million) that the institution received from non-UK domiciled individuals taught in the United Kingdom. A summary of the survey responses are presented in Table 43 **though these results are heavily caveated given the differences between these survey results and wider evidence in the field.**

Table 43: Summary of survey responses: English Language training schools, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Students registered <i>(number of respondents)</i>	99,496 (99)	114,290 (102)	127,698 (105)	140,404 (109)	153,401 (111)
Average duration (weeks) <i>(number of respondents)</i>	12.11 (96)	14.17 (99)	14.38 (101)	14.75 (105)	11.41 (107)
Training fee income (£m) <i>(number of respondents)</i>	60.87 (65)	76.20 (72)	90.27 (75)	103.68 (78)	117.06 (80)

Note: All information relates solely to non-UK domiciled students registered with the institution (excluding those who study in a country outside of the UK, known as transnational education).

Source: London Economics survey of UK Border Agency Tier 4 (students) sponsors

Tuition fees

When overseas students come to the UK to learn English, they pay a training fee to cover the costs of their course. At present, no data is collected on training fees for English Language courses as it is difficult to define the market due the large number of non-accredited centres. Using the results from the London Economics' survey of UK Border Agency Tier 4 (students) sponsors (Table 43), we can estimate the total training fee income from overseas students for ELT institutions.

Firstly, we take the number of students registered with responding institutions and divide this by the number of survey responses to derive a figure for the average number of students per institution. We also calculate the average training fee income per student by dividing the training fee income by the number of students registered.

We know that in total there are approximately 834 ELT institutions in the United Kingdom, of which 444 are accredited centres. Therefore, by multiplying the number of students per ELT institution by the total number of institutions we generate an estimate of the total

number of overseas students (over 1.1 million in 2008/09). Multiplying the number of students by the estimate of the average training fee⁴⁹ provides an estimate of the total training fee income from overseas students studying at UK based ELT institutions⁵⁰. This is presented in Table 44.

Table 44: Time series of total training fee income from overseas students, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Number of ELT schools	834	834	834	834	834
Average no. of students per ELT school	1,005	1,120	1,216	1,288	1,381
Total number of students	838,178	934,489	1,014,287	1,074,284	1,152,580
Average training fee income per student	£612	£667	£707	£738	£763
Total training fee income (£ m) (current prices)	512.8	623.0	716.9	793.3	879.5
Total training fee income (£ m) (constant 2008/09 prices)	568.0	675.4	759.5	816.0	879.5

Note: We assume that the number of ELT institutions has remained constant since 2004/05. Average training fee income is estimated from the survey results presented in Table 43: total training fee income/average number of students registered

Source: London Economics Survey of UK Border Agency Tier 4 (students) sponsors

Based on this approach, we have estimated that the total training fee income from overseas students was approximately **£879.5 million** in 2008/09 and **£793.3 million** in 2007/08. This compares with the previous estimates⁵¹ by Lenton (2007) where she estimated that the total training fee income generated by ELT schools was £688.6⁵² million in 2002/03 and £716.0⁵³ million in 2003/04, based on confidential information provided by English UK.

Other spending of overseas ELT students in the UK

In addition to tuition fees, overseas students also pay for accommodation and other day-to-day expenses incurred in the UK over the duration of their study. There is no data available on the non-training fee expenditure of English Language Training overseas

⁴⁹ £1,040 per student in 2007/08 and £1,074 per student in 2008/09

⁵⁰ According to the 2009 Language Travel magazine, the average training fee per week in 2009 was £706 (US\$ 1,185)

⁵¹ Note that the 2009 Language Travel magazine estimates that there were 622,256 English Language students attending ELT schools in the United Kingdom. Our understanding is that this estimate related to accredited providers only, thus accounting for the discrepancy in the estimated in student numbers. If we assume that the average number of students attending accredited and non-accredited institutions is the same, then the total number of student attending any privately operated English Language training schools stands at 1.168 million, which is approximately 6% greater than our estimate.

⁵² In 2008/09 prices

⁵³ In 2008/09 prices

students whilst in the UK. Therefore, we again use the data from SIES and, as before, assume that the weekly expenditure of English Language training students is the same as for domestic HE students.

As before, we have to subtract the tuition fee expenditure from other expenditure for ELT students, as it has already been accounted for above. From our survey of Tier 4 sponsors, we estimate the average tuition fee paid per student to be approximately £738 in 2007/08 and £763 for 2008/09. Subtracting this from the average expenditure per student in an academic year (39 weeks) from SIES data, we arrive at £11,516 and £11,862 in 2007/08 and 2008/09 respectively. Per week, non-training fee expenditure equates to £295 and £304, respectively.

In November of each year, the Language Travel Magazine (LTM) looks at the global English language market. In this analysis, it provides data on the English language market by student weeks. For 2009, the UK market was estimated to consist of 3,671,310 student weeks and 3,613,490 student weeks in 2008.

Based on our estimated weekly non-tuition fee expenditure and the LTM total student weeks figure, the total non-training fee expenditure of overseas English language students in the UK was estimated to be **£1,067.0 million** in 2007/08 and **£1,116.7 million** in 2008/09.⁵⁴

In order to backfill the time series of the total non-training fee expenditure of overseas English language students in the UK, the ratio of total training fee expenditure to total non-training fee expenditure in 2007/08 is used to estimate total non-training fee expenditure by overseas English language students in the UK for the years 2004/05 to 2006/07. The full time series is presented in Table 45.

Table 45: Time series of total non-training fee income from overseas students, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Total non-training fee income (£m) (current prices)	689.7	837.9	964.2	1,067.0	1,116.7
Total non-training fee income (£m) (constant 2008/09 prices)	757.7	904.4	1,016.1	1,099.1	1,116.7

Source: London Economics. Totals may not sum due to rounding errors.

These estimates are just over twice the size of Lenton's previous estimates of £443.0 million in 2002/03 and £507.5 million in 2003/04 (in 2008/09 prices). This is not surprising, as there has been significant growth in the number of overseas students studying at English Language Training schools in the UK, shown by our survey responses on student numbers (Table 43), so a large increase of the value of the sector is to be expected. However, the increase in student numbers is not solely responsible for the difference in the estimates. Part of the difference in the value of non-training expenditure is potentially

⁵⁴ ⁵⁴ Number of student weeks multiplied by the average non-tuition fee student expenditure per week

driven by differences in the length of student stay; however, we are unable to compare the assumption in this paper with those of Lenton (2007), as at no stage was information on the total number of students or student-weeks presented.

Summary

Combining the information on the level of tuition fee income and non-tuition fee expenditure of students while they are in the United Kingdom learning English, we have estimated that the total export income generated by the ELT sector stands at **£1,996.2 billion** in 2008/09. This is presented in Table 46. One reason why these estimates of the export contribution of English Language Training schools is significantly higher than the previous estimates of Lenton (2007) relates to the large and increasing number of students in more recent years, although differences in the duration of stay may also explain some of the differences.

Table 46: Total export income generated by ELT Colleges (current prices), 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Tuition fee income (£m)	512.8	623.0	716.9	793.3	879.5
Net non-training fee expenditure	689.7	837.9	964.2	1,067.0	1,116.7
Total	1,202.5	1,460.9	1,681.1	1,860.3	1,996.2

Source: London Economics' primary survey and analysis. Totals may not sum due to rounding.

This is presented in 2008/09 prices in Table 47.

Table 47: Total export income generated by ELT Colleges (constant 2008/09 prices), 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£m	£m	£m	£m	£m
Tuition fee income (£m)	568.0	675.4	759.5	816.0	879.5
Net non-training fee expenditure	757.7	904.4	1,016.1	1,099.1	1,116.7
Total (2008/09 prices)	1,325.7	1,579.8	1,775.6	1,915.1	1,996.2

Source: London Economics' primary survey and analysis. Totals may not sum due to rounding.

Qualification awarding bodies

Qualification awarding bodies include exam boards and professional bodies. To undertake an assessment of the value of education exports contributed by examination/professional bodies, we use information from the Ofqual *Annual Qualifications Market Report* (March 2010). This report presents Companies House financial information for 16 of the largest 20 organisations in the sector (identified by Ofqual based on financial information and achievements in 2008/09). The total income figures include activity related to regulated

qualifications, income from overseas qualification provision⁵⁵ and other business not strictly related to providing qualifications.

Whilst this may be a small sample of the entire qualifications market in the United Kingdom, given the concentrated nature of the market, we take the total income from the 16 organisations as an approximation to the total income of the qualifications market. This is presented in Table 48.

Table 48: Total income of qualification awarding bodies, 2005 to 2008

	2005	2006	2007	2008
Total income (£million)	625.2	658.3	711.7	728.8

Note: The total income figure is based on 16 awarding organisations.

Source: Table 4.1, Awarding organisation income in millions, Ofqual Annual qualifications market report, March 2010

The total income figures in Table 48 relate to income from all qualifications awarded by the bodies to UK-based and overseas-based students, so it is necessary to filter this to isolate only the income that comes from overseas. For this we use the findings from a market survey and analysis of all qualification awarding organisations in the UK conducted by PricewaterhouseCoopers LLP (*The Market for Qualifications in the UK*). The report states that 74% of all qualification awarding body respondents indicated that they operated in an overseas market and that “of those that operated in overseas markets, one-third stated that the proportion of their turnover derived from overseas markets was greater than 5%, although one-fifth stated that it was less than 1%” (Section 4.19).

On the basis of these findings and assuming that the achieved sample is representative, we have assumed that 24% of all firms indicated that 5% of their revenues are generated from overseas; 35% of firms generate approximately 3% of revenues from overseas and 15% of firms derive approximately 1% of their revenues from overseas. Applying these proportions to the total industry income in Table 48, we arrive at a total income contribution from overseas markets for 2008 of **£17.5 million**.

Table 49: Total awarding organisation income from overseas markets, 2005 to 2008

	2005	2006	2007	2008
Total income from overseas markets (£m) (current prices)	15.0	15.8	17.1	17.5
Total income from overseas markets (£m) (2008/09 prices)	16.5	16.6	17.6	17.5

Source: Ofqual Annual qualifications market report, March 2010, Table 4.1, Awarding organisation income in millions; PricewaterhouseCoopers LLP “The Market for Qualifications in the UK”, April 2005 and London Economics’ analysis

⁵⁵ Which is outside the scope of the regulators.

It should be noted that we have only included examination fees from students studying UK qualifications in overseas countries and not from non-UK domiciled students taking examinations in the UK (whose examination fees form part of the tuition fees paid income paid). Therefore, the examination fee income would already be included in the training fee income components above, and to include it again would lead to double counting.

These estimates are significantly lower than the previous estimates of Lenton (2007), whose estimates are equivalent to £188.8 million in 2002/03 and £220.4 million in 2003/04 at 2008/09 prices. The reason for the difference is due to the fact that Lenton based her estimates of income on a special postal survey of examination boards and professional bodies that included fees paid to the awarding body for examinations taken in the United Kingdom by international students. We believe this led to an overestimate of the income due to double counting with tuition fee income.

Independent primary and secondary schools

A large number of non-UK domiciled students attend primary and secondary school in the United Kingdom in the independent school sector. Due to the minor status of primary and secondary school students, this category generally refers to schools which offer boarding (at a minimum).

The Independent Schools Council (ISC) reports that there are 21,533 non-British students with parents living overseas in 2008/09. The historical evolution of the number of overseas student numbers is shown in Table 50. In previous annual censuses, the ISC also reported receipts of tuition fees from overseas students, but this information is no longer provided. The 2006 ISC Census was the last Census to give data on the total fees contributed by overseas students and the number of overseas students that were day pupils and full boarders.

Table 50: Time series of overseas student numbers, 2004/05 to 2009/10

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Number of non-British students with parents living overseas	15,690	20,186	20,852	20,545	21,533	23,307

Source: ISC annual Census' 2004 to 2010

To deal with this gap in the evidence, we estimate the income from tuition fees from overseas students using elements of data from the ISC 2006 Annual Census combined with more recent information on pupil numbers.

From the 2006 ISC Census, we calculate the proportion of overseas students that are day pupils and full boarders (8% and 92% respectively) and have assumed these proportions to have remained relatively constant over time. Then we multiplied these proportions by the number of overseas students indicated in the ISC 2010 Annual Census (21,533). This gives the total of 19,864 overseas students that are boarding and 1,669 day pupils. Next, to estimate export income, we multiply these figures by the average boarding fee and the average day fees paid per year (£23,244 and £10,296 respectively) and combine them to

generate the overall contribution in fees by overseas students, which stands at **£478.9 million** in 2008/09.

Table 51: Overall contribution in fees by overseas students, 2010

	Boarders	Day Pupils
Total non-British pupils with parents living overseas	21,533	
Proportion of boarders	92%	8%
Total non-British boarders	19,864	1,669
Average overall boarding fee (term)	£7,748	£3,432
Average overall boarding fee (year)	£23,244	£10,296
Overall contribution in fees by boarders	£461.7 m	£17.2 m
Overall contribution in fees by overseas students	£478.9 million	

Source: ISC 2010 Annual Census and ISC 2006 Annual Census

For the years from 2008 onwards, we used the same method as above to estimate the receipt of tuition fees from overseas sources. Between 2004 and 2007, we took the figures from the respective ISC Annual Censuses, which are presented in Table 52.

Table 52: Time series of total receipts of tuition fees from overseas sources, 2004/05 to 2008/09

	2004/05 £m	2005/06 £m	2006/07 £m	2007/08 £m	2008/09 £m
Receipts of tuition fees from overseas sources (£m) (constant 2008/09 prices)	285.3	347.7	441.5	446.4	478.9

Note: All figures are in 2008/09 prices, adjusted for CPI.

Source: ISC Annual Census' 2004-2010

Given the growth in student numbers from 2004 (which drives the growth in tuition fee income), our estimate is significantly higher than that of Lenton (2007) who estimated the contribution of the sector to be £246.4 million in 2003 (equivalent to £276.5 million in 2008/09 prices). As Lenton also used the ISC Annual Census, but was able to draw on the receipts of tuition fees from overseas sources reported in the 2004 census, our estimate is likely to be of equivalent robustness to that of Lenton (2007).

No other existing estimates of the value of independent primary and secondary schools were found.

Private sector training

The only source of information on the value of exports of the private sector training sector is from the survey of Tier 4 sponsors, which includes private training organisations. Organisations identifying themselves as a private training organisation were surveyed as

to the number of non-UK domiciled students registered, the average duration of their training courses in weeks, and the total training fee income from such overseas students. Table 53 presents a summary of the responses of those organisations participating in the survey with complete responses on these questions. The numbers of respondents on which the totals are based are given in parentheses.

Table 53: Summary of survey responses: Private training organisations, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Students registered* <i>(number of respondents)</i>	7,911 (21)	8,715 (22)	8,585 (22)	9,772 (23)	12,042 (25)
Average duration (weeks)* <i>(number of respondents)</i>	27.5 (19)	28.5 (20)	29.0 (20)	32.7 (21)	38.8 (24)
Training fee income (£million)* <i>(number of respondents)</i>	12.2 (16)	14.7 (17)	16.7 (17)	19.7 (18)	28.2 (20)

Note: An outlier response (of more than 7,000 students and £30 million of income) has been removed.

Source: London Economics survey of UK Border Agency Tier 4 (students) sponsors

The average fee charged per trainee stands at £2,342, which covers a period of training lasting approximately 36 weeks. For the 21 private training providers responding to the survey, the average income generated from non-UK domiciled students stands at approximately £1,400,000; however, from the survey, it is not possible to generate an aggregate estimate of the export value of the entire industry because we do not know how many private sector training providers make up the industry as a whole.

Previous approaches

In the absence of more solid information, we return to update Lenton's approach. Lenton (2007) used an estimate for the value of private sector training exports for 1999 of £1.25 billion, provided by Rylance-Watson (1999), and inflated it up using the RPI. This resulted in a figure of £1.35 billion for 2002 and £1.39 billion for 2003. Using a similar methodology, we estimate that private sector training contributes **£1.48 billion** in 2009, based on CPI between 1999 and 2009 is 16.7%. Clearly, a risk of using this approach is that it relies on a survey that is very dated and a standard rate of growth, which may not be realistic.

Table 54: Time series of total private sector training income from overseas sources, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
	£ billion				
Private sector training exports <i>(constant 2008/09 prices)</i>	1.34	1.37	1.40	1.44	1.48

Source: UK Exports of Training Expertise, Elizabeth Rylance-Watson and associates (1999), cited by Lenton (2007) and Johnes (2004)

Education-related publishing

An important means in which income is generated from overseas is through the sale of school, English Language Training, and academic books abroad. The Publishers Association Statistics Yearbook 2009 provides data on the publisher sales of School/ELT and Academic/Professional exported books. For the calendar year 2009, the value of educational publishing exports was **£749.0 million**. This is estimated by adding the sales figures from the School/ELT and Academic/Professional categories together. Using the data available, we were able to obtain estimates of the value of educational publishing to the UK economy since 2005 (Table 55).

Table 55: Publisher sales of education-related exported books (net value at invoiced prices)

	2005	2006	2007	2008	2009
School/ELT (£m)	258.0	255.0	275.0	305.0	304.0
Academic/Professional (£m)	355.0	386.0	397.0	423.0	445.0
Total £m (current prices)	613.0	641.0	672.0	728.0	749.0
Total £m (2008/09 prices)	678.9	694.9	711.9	748.8	749.0

Source: Table 3.1b, Publishers Association Statistics Yearbook 2009

Our estimate appears to be more accurate than the estimate produced by previous authors. Lenton (2007) used a broader range of exports from the MQ10 UK Trade in Goods Analysed in Terms of Industries (books, journals and other publishing) and therefore included some publications that were not education-related. Consequently, the estimate produced by Lenton (2007) of £1,568 million⁵⁶ for 2003-04 appears to significantly overestimate of true value of educational publishing to the UK economy.

For completeness, and to show that our approach is the most robust, we also estimated a figure using the MQ10 UK Trade in Goods Analysed in Terms of Industries. We considered the sales of books, journals and other publishing materials, which amount to £2,278.0 million in 2009. This estimate is multiplied by the proportion of these sales that is expected to be education related. From the Publishers Association Statistics Yearbook 2009, it can be seen that 44% of exported books were either School/ELT or Academic/Professional. Thus, multiplying 44% by £2,278.0 million, we get an estimate of approximately £1.0 billion, which is approximately £250 million greater than our Publishers Association estimate. As previously mentioned, £1.0 billion is potentially an overestimate of the actual value of education-related exported books, since it uses a broader range of exports and it is not clear what is included in 'other publishing'. Our estimate using the Publishers Association data appears to be more robust than the estimate using the MQ10 data.

⁵⁶ In 2008/09 prices, inflated using CPI

Education-related equipment

The MQ10 UK Trade in Goods Analysed in Terms of Industries reports exports of general office equipment. In particular, the estimate of the value of chairs and other office and shop furniture exported stands at £519.0 million; office machinery exported stands at £928.0 million, while the export of computers and processing equipment stands at £6,355.0 million. However, these estimates incorporate all forms of office furniture and machinery and not necessarily education related activity. This information (also backdated to 2003) is provided in Table 56.

Table 56: Exports of office equipment and machinery

	2003	2004	2005	2006	2007	2008	2009
	£m	£m	£m	£m	£m	£m	£m
Manufacture of chairs and seats	300	352	365	430	505	538	423
Manufacture of other office and shop furniture	99	108	113	121	124	124	96
Manufacture of office machinery	775	832	859	931	940	973	928
Manufacture of computers/process equipment	8,893	8,023	8,949	10,658	7,282	6,870	6,355
Total	10,067	9,315	10,286	12,140	8,851	8,505	7,802

Source: MQ10Q110 Table 1 exports by industry, MQ10Q109 Table 1 exports by industry, MQ10Q108 Table 1 exports by industry, MQ10Q107 Table 1 exports by industry

Rather than use the MQ10 data, previous estimates of the value of exports of education-related equipment (Johnes, 2004; Lenton, 2007) have relied on a survey of suppliers conducted by the British Educational Suppliers' Association (BESA) in 2003. As this data is now seven years out of date, we approached BESA for more recent data, who provided the findings of an updated version of the 2003 survey covering 2009, 2010 and the outlook for 2011.

This new survey showed that the value of exports by BESA member companies was £302.0 million in 2009. However, as BESA's membership covers approximately two thirds of the industry as a whole (based on a collective turnover of just under £2 billion out of an estimated total industry of £3 billion). Accordingly, we 'gross up' the export performance of BESA members to the whole industry, as done by Johnes (2004), yielding an estimated total value of exports of education-related equipment of **£453.0 million** in 2009.

Comparing our estimate to previous estimates (using similar data and methodology) reveals that the value of education-related equipment seems to have fallen over the past decade, reflecting a more general decrease in the value of exports of the broader office equipment and machinery industry (evident in the MQ10 data presented in Table 56). Johnes (2004) first estimated that the value of exported educational supplies was £505 million in 2001/02 (based on a non-deflated grossing-up of the 2003 survey values). Lenton (2007) used a simple adjustment of the Johnes' (2004) estimate to account for positive inflation rates, assuming that the annual total value of educational exports remained constant over time, resulting in an estimate of £519.6 million in 2002/03 and £535.2 million in 2003/04, which is the equivalent of £595.8 million in 2008/09. In addition to the general decrease in the broader office equipment and machinery industry, BESA also suggested the decrease to be due to a lack of major projects undertaken in 2009 for

the engineering teaching equipment sector, whereas in 2003 there were large projects delivered in Mexico and Qatar.

To provide a historical time-series of export value of education-related equipment from the UK, we use historical data on the size of the office equipment and machinery industry from the MQ10 UK Trade in Goods Analysed in Terms of Industries, combined with the calculated proportion of this broader export market that is accounted for by education-related equipment exports. We can calculate the education-related proportion for 2003 and 2009 easily based on the 2003 and 2009 BESA surveys. To estimate the value of this proportion in the intervening years, we have interpolated the 2003 and 2009 proportions on a straight line basis.

In 2003, the sum of all the MQ10 office equipment and machinery exports was £10,067 million whilst total exports of education related equipment and machinery was £505 million, suggesting a 5.0% share. By 2009, the value of exports of office equipment and machinery had fallen to £7,802 million and while the value of education-related equipment exports also fell, it fell at a slower rate, giving a share of 5.8% in 2009. This is presented in Table 57.

Table 57: Exports of education related office equipment and machinery

	2003	2004	2005	2006	2007	2008	2009
	£m						
Total exports of office equipment and machinery	10,067	9,315	10,286	12,140	8,851	8,505	7,802
Proportion education related	5.0%	5.1%	5.3%	5.4%	5.5%	5.7%	5.8%
Total exports of education related equipment and machinery (current prices)	505.0	480.0	543.0	657.0	491.0	483.0	453.0
Total exports of education related equipment and machinery (constant 2008/09 prices)	576.5	540.6	601.4	712.2	520.2	496.8	453.0

Note: The education-related proportion of total exports of office equipment and machinery for 2004 through 2008 have been interpolated on a straight line basis, and have been used to prepare the estimates of total exports of education related equipment and machinery for those years.

Source: MQ10Q110 Table 1: Exports by industry, MQ10Q109 Table 1 exports by industry, MQ10Q108 Table 1 exports by industry, MQ10Q107 Table 1 exports by industry. London Economics' analysis

Education-related consultancy

The value of education-related consultancy is the most contested estimate contained in previous studies. Whereas the Johnes (2004) and Lenton (2007) estimates both include the value of **all** consultancy services provided by UK residents to non-residents per ONS's *The Pink Book*, in actual fact, not all consultancy is education-related activity and only consultancy with a link to education should be included. This is a significant issue because consultancy was the largest component in the previous analyses, accounting for more than half of the total estimated value of education-related exports in each of the previous studies. A key methodological improvement of our study is an in-depth examination of the estimation of the education component of consultancy (only). We outline our refined

approach below, highlighting methodological differences to Lenton's measurement approach.

As with Johnes (2004), the Lenton (2007) estimate included a large component for exports of educational consultancy services, which was calculated as the unadjusted sum of the value of exports relating to business management and management consultancy, advertising, market research, research and development and other miscellaneous business activities presented in *The Pink Book*. The total value of these categories was £14,352 million in 2002 and £15,117 million in 2003 (equivalent to approximately £16,233 million and £16,922 million, respectively, in 2008/09 prices).⁵⁷

However, an examination of the definitions of the data series aggregated by Lenton reveals that the included services are to a large extent not relevant to educational services exports and should not be incorporated into our analysis. The presentation of the UK's accounts in ONS's *The Pink Book* is based on the IMF Balance of Payments Manual 5th edition (BPM5), which describes the methodology for measuring the economic transactions of an economy with the rest of the world. The definitions of each of the services included as 'consultancy' by Lenton (2007) are:⁵⁸

- **Management consulting** covers the provision (by or for residents for or by non-residents) of ... management consulting related to the provision of advice, guidance, or operational assistance to business;
- **Advertising and market research** services transacted between residents and non-residents covering the design, creation, and marketing of advertisements by advertising agencies; media placement, including the purchase and sale of advertising space; exhibition services provided by trade fairs; the promotion of products abroad; market research; and public opinion polling abroad on various issues;
- **Research and development** services cover those services that are transacted between residents and non-residents and associated with basic research, applied research, and experimental development of new products and processes. In principle, such activities in the sciences, social sciences, and humanities are covered; included is the development of operating systems that represent technological advances; and
- **Other** services transacted between residents and non-residents cover items such as placement of personnel, security and investigative services; translation and interpretation; photographic services; building cleaning, etc. Also included are

⁵⁷ On a finer point of Lenton's methodology, there is a slight timing inconsistency with the 2002 figures from the Pink Book (2003) being used for 2002/03, while the 2004 figures from the Pink Book (2005) were used for 2003/04. Note also that the 2003 Pink Book (2003) data may be more appropriate for 2002/03 academic year which runs from September to August.

⁵⁸ International Monetary Fund (1993), *Balance of Payments Manual, 5th edition*, IMF, Washington, DC (p. 68).

payments for local supplies, utility payments, etc. by non-resident enterprises engaged in construction services.

In considering what should be included in, and what should be excluded from, the 'educational element of the value of consultancy', it is worth returning to the definition of an education-related activity (Section 0), namely, *all activities where education is the process and/or the output, as well as suppliers to that sector*. Note that activities where education is an input are excluded. It is clear from these definitions that little, if any, of the activities listed within *The Pink Book* are education-related (in either process or output), and so the export value of these services should not be included.

In view of the identified methodological limitations of previous estimates, there is clear scope for improvement in filtering the education element from the more broadly defined category of consultancy. As requested by the Department for Business Innovation and Skills, we have placed a more precise focus on the educational element of the value of consultancy alone. The question now turns to how much of 'consultancy' is education-related?

Of the categories included in the Johnes and Lenton reports, R&D (ITIS code 16) may be relevant. However, the International Trade in Services (ITIS) survey data is collected entirely from the private sector and excludes the non-market educational sector. *The Pink Book* does however include an export value for training and educational services as part of 'Other personal, cultural & recreational services' (*The Pink Book*, Table 3.10). The data is sourced from the International Trade in Services (ITIS) covering training and educational services (ITIS Code 41), though the ONS have since clarified that the values relate solely to educational services. In 2008, the value of training and educational services was £272 million. This estimate is approximately 1.6% of the original estimate generated by Lenton (2007).

Table 58: Value of training and educational services (ITIS code 41) exports, 2006-2009

	2006 £m	2007 £m	2008 £m
Training & educational services	34	37	272

Source: International Trade in Services (ITIS)

An important consideration in compiling our overall estimate of the value of UK education exports is the possibility of double-counting. In order to avoid this possibility, it is important to consider the extent to which any education-related consultancy items may have been included elsewhere in another 'building block' of the estimate.

To investigate the risk of double-counting, we consider what type of work 'education-related consultancy' might include. Consultancy services offered by HEIs, FECs and other education institutions might include paid research projects, training courses, educational studies and publications, whereas educational services provided by the private sector is likely to be confined to training courses. When viewed against the activities already valued in this report, it seems highly likely that the value of exports of education-related consultancy will have already been counted elsewhere in our estimates (e.g. private sector

training, HE research contracts)⁵⁹. Therefore, due to the high risk of double-counting, we have not included a separate estimate for education-related consultancy. It is important to note that this does not mean that the value of education-related consultancy exports is nil, but rather that the value of such exports is included and reported under other activities in this report.

In terms of lessons for future estimation studies, it is clear that estimating the value of exports of education-related consultancy activities faces both definitional and data availability issues. The appropriate definition will depend on the purpose of the research, and so cannot be prescribed. It is important however that the reporting of data in *The Pink Book* should be further broken down so as to allow the isolation of education-only components.

Education-related broadcasting

A number of education-related programmes are broadcast overseas by the BBC, Channel 4 and the Open University (OU) and these can be an important source of export earnings

Starting with the export earnings generated by the BBC, the BBC Chief Executive's 2008/09 annual review⁶⁰ reveals the income generated from BBC Worldwide to be approximately £1,074.9m⁶¹. In an attempt to estimate the proportion of the income from BBC Worldwide attributed to education-related broadcasting, we adopt the following approach. Firstly, we take the number of hours of (formal) Education programmes that are broadcast over BBC One, BBC Two, BBC Three and BBC Four and divide this by the total number of network hours. This gives us the proportion of network hours taken up by (formal) education programmes (1.87%). Whilst Children's broadcasting (CBBC, cbeebies) could also be considered to be educational to some extent, we have decided to include only formal education broadcasting in our estimate in order to provide a most conservative estimate. We then multiply the calculated proportion by the total income from BBC Worldwide, giving an estimate of the overseas income generated from (formal) education programmes of £20.1 million.

⁵⁹ We have also included consultancy contracts from HEI's in the HE section of this report

⁶⁰ Table 1c, BBC Full Financial and Governance Statements 2008/09

⁶¹ Including joint venture income totally £299.0 million

Table 59: Education-related broadcasting by the BBC, 2008/09

	2008/09
Total hours of Education (formal)	444
Total network hours	23,710
Proportion of Education hours	1.87%
Total income from BBC Worldwide (£m)	1,074.9
Total income from Education (formal) (£m)	20.1

Note: total income from BBC Worldwide includes income from joint ventures.

Source: Table 1c BBC Full Financial and Governance Statements 2008/09, Table 4 BBC network television hours of output by genre, BBC Part Two: Annual Report and Accounts 2008/09 The BBC Executive's review and assessment

In previous years, the Chief Executive of Channel 4 has reported the turnover of its '4 Learning' venture in its annual review. However, the elements of the '4 Learning' business were separated and transferred to other operating business units in 2005. Therefore, there is no data on the turnover of '4 Learning' after 2004. Moreover, '4 Learning' was taken over by Espresso Education Ltd. in 2007. As a privately limited company, there is no obligation to publish annual reports disaggregated by activity, therefore specific estimates of the value of education-related broadcasting exports are not available. The most recent estimate of the turnover of '4 Learning' was £23.5 million in 2004, with an estimates of £21.4 million and £20.9 million for 2003 and 2002 respectively (an average annual increase of 6.1% year on year). Continuing this growth pattern forward implies an estimated revenue to '4 Learning' of £31.6 million in 2009; however, we know that the majority of this revenue will come from within the UK economy. With no information available on the proportion of earnings that are export-related, we make the assumption that 10% of this income is earned from exports to allow calculation of the education-related broadcasting aggregate. This implies a valuation of £3.2 million for exports of '4 Learning' broadcasting in 2008/09.

Education programmes broadcasted by the Open University Worldwide, in partnership with BBC World, Discovery and local terrestrial broadcasters, reach a global audience of more than 270 million people⁶². Open University Worldwide sells Open University media products either by licensing content to broadcasters or through distribution rights. Of the £9.7m Open University Worldwide turnover in 2009/10, revenue from broadcast sales amounted to £1.9m, of which £1.2m was through international sales and the balance was UK sales⁶³. It is worth noting, however, that some OU content is available worldwide for free through the OpenLearn initiative and other sources such as iTunesU.

Combining the valuations for the BBC, '4 Learning' and the Open University provides a final estimate of broadcasting of **£24.5 million** in 2008/09.

⁶² The Open University Annual Report 2008/09.

⁶³ Information from a personal contact at Open University Worldwide

Table 60: Sales of education-related broadcasting exports, 2008/09

	Broadcast sales £m
BBC Worldwide	20.1
4 Learning	3.2
Open University Worldwide	1.2
Total Broadcasting	24.5

Source: London Economics analysis

When estimating the value of educational broadcasting, we have used a similar approach to Lenton (2007). However, Lenton's estimate of BBC Worldwide is substantially larger than ours – £743.0 million in 2002/03 and £754.7 million in 2003/04⁶⁴. The reason for the difference is that Lenton included all broadcast income for BBC Worldwide rather than only the education-related aspect, suggesting it to be a clear overestimate. We have corrected this in our methodology and have also added data on broadcasting by the Open University that was unavailable to Lenton.

Education-related Foreign Direct Investment

Consistent with the International Monetary Fund's (1993) Balance of Payments Manual, Foreign Direct Investment (FDI) may be defined as a long-term investment, inferring an equity ownership share of 10% or more, by an entity in one country in another entity in another country.⁶⁵

Confidential survey of Tier 4 sponsors

The bespoke survey of Tier 4 sponsors surveyed respondents in relation to any investment funding that their organisation (including any UK-based centres) had received from any non-UK domiciled investor (in return for an ownership share of 10% or more). It should be noted that all types of education and training related organisations participating in our survey were asked this question and so all responses are provided together (not separated by organisation type). The responses are summarised, along with the number of responses they relate to, in Table 61.

⁶⁴ All figures are in 2008/09 prices.

⁶⁵ International Monetary Fund (1993) Balance of Payments Manual, Fifth Edition (BPM5), Washington, D.C.

Table 61: Summary of survey responses: Foreign Direct Investment, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Total investment funding from non-UK investors (£m)	4.1	3.3	2.2	2.8	2.0
<i>(number of respondents)</i>	<i>(108)</i>	<i>(105)</i>	<i>(106)</i>	<i>(109)</i>	<i>(111)</i>

Note: This is the total FDI across all institutions

Source: London Economics survey of UK Border Agency Tier 4 (students) sponsors

Aggregating the responses above implies that the average level of FDI per respondent stands at approximately £18,225. Assuming representativeness of these responses, and grossing this estimate to cover all Higher Education institutions, Further Education Colleges and privately owned English Language Training schools results in an estimate of total FDI of £26.0 million in 2008/09.

Alternative evidence - Ernst and Young European Investment Monitor

In terms of secondary data sources, the Ernst and Young European Investment Monitor (E&Y EIM) provides data on FDI projects in the United Kingdom. This follows the same ISIC industry classification scheme, however, provides much more sharply defined data in terms of categorisation compared with the Office for National Statistics 'Business Monitor MA4 Foreign Direct Investment' (MA4), although less in terms of value of projects. The E&Y EIM list of sector categories includes "education" and it also lists FDI projects by activity, which includes separate categories for "education and training".

From analysing this data, we discovered there were seven projects in the "education" sector and nine projects whose activity was recorded as "education and training" (mutually exclusive to the "education" sector projects).

A number of these projects did not have capital expenditure data available, and thus we had to estimate their level of capital expenditure (using employment proxies). Of the sixteen education-related projects in the E&Y EIM, only five had data on capital expenditure. To calculate the capital expenditure data for the remaining projects, we firstly looked at the individual sector of each project that had a missing value. We had seven different sectors to look at: education, business services, automotive assembly, software, machinery and equipment, other transport services, and electronics.

In each of these sectors, we filtered the data until we found all the projects that had information on capital expenditure in the year that each of our FDI projects was undertaken. We then calculated the average capital expenditure per employee for each relevant sector, and multiplied this figure by the number of employees for each project in our list.

For example, for the education sector we had a missing value for a project that was completed in 2007. So we used the E&Y EIM, and filtered this information down by sector (education) and year (2007). Then we calculated average capital expenditure per employee (for all projects that had data on capital expenditure and employee numbers)

and multiplied this by the number of employees in the company with the missing value to give us our estimate.

Unfortunately, this did not lead to all missing values being accounted for, since some of the companies we were interested in also had missing data on the number of employees. Therefore, to estimate their capital expenditure, we took all of the projects undertaken in their respective sector over all time periods available and found the average capital expenditure per project. This is the figure we use for each remaining missing value.

From this analysis, we discovered that the seven projects in the “education” sector contributed US\$9.52 million in capital expenditure to the UK economy across 2007 and 2008. In addition, the nine projects whose activity was recorded as “education and training” (that were mutually exclusive to the “education” sector projects) contributed a total of US\$52.8 million in capital expenditure across 2007, 2008 and 2009.

Using the effective exchange rate in each year⁶⁶, this gives a total estimate of capital expenditure from education-related FDI projects between 2007 and 2009 of £44.2 million. The breakdown by year is shown in Table 62.

Table 62: Time series of total education-related Foreign Direct Investment, 2007 to 2009

	2007	2008	2009
Capital expenditure (US\$ million)	1.625	47.30	13.39
Exchange rate	1.3705	1.4708	1.3948
Capital expenditure (£ million)	1.19	33.43	9.60

Source: UK 2007-09 E&Y EIM, EUROSTAT

Another source for statistics on FDI is the Business Monitor MA4 Foreign Direct Investment, published by the Office for National Statistics (ONS). Table 5.3 in MA4 presents annual net FDI flows into the UK economy by country of origin and industrial sector. However, there is no sector specifically for education which means we are unable to provide an estimate of education-related FDI using the MA4 data.

Alternative evidence - ONS special extraction

The ONS have supplied the Inward FDI data (stocks and flows) for the Education sector. The breakdown of this Inward FDI is between schools and Higher Education, however, we would anticipate that the majority is in the Higher Education rather than schools sector.

As can be seen from Table 63, the value of the flow in inward FDI to the UK fluctuates substantially from one year to the next (in the range of -£288 million to +£55 million between 2006 and 2008). Stock data is considered to be more reliable than the flows data. Note that although in principle the stock in year t can be derived from the *flow* in year t and stock in year $t-1$, this gives a discrepancy of about 15%. This is due to price and exchange rate changes and re-valuations. Large differences can also exist because the

⁶⁶ 1.3075 in 2007, 1.4708 in 2008 and 1.3948 in 2009, Eurostat

sample is not a panel. For these reasons, we have selected the FDI inflow data from the E&Y EIM as our estimate of investment into the education section from overseas.

Table 63: Inward FDI for enterprises in the education sector*, 2005-2008

	2005	2006	2007	2008
Stock	25,567	30,699	34,060	37,881
Flows	-	55	-288	-34

Note: * The 'education sector' is defined as SIC2003 Section M (80.1-80.42)

Source: ONS Foreign Direct Investment surveys

Baseline estimate of the value of UK education exports: Summary

Based on the research and analysis presented in this section, we estimate the value of UK education exports to be £14.1 billion in 2008/09, with education-related projects attracting a total of £9.6 million Foreign Direct Investment. The breakdown of the total export income is presented in Table 64.

Table 64: Value of education and training exports to the UK economy, 2008/09

	2008/09 (£m)
Higher Education	7,873.5
<i>Tuition fees</i>	2,442.3
<i>Other spending of overseas HE students in the UK</i>	4,344.9
<i>Transnational education (HE)</i>	210.8
<i>Income from research grants and contracts</i>	647.9
<i>Income from licensing intellectual property</i>	46.6
<i>Income from consulting, facilities and equipment</i>	84.9
<i>Income from overseas alumni, charitable organisations</i>	34.5
<i>Other income from overseas (HE)</i>	61.6
Further Education	1,070.3
<i>Tuition fees</i>	138.6
<i>Other spending of overseas FE students in the UK</i>	867.6
<i>Transnational education (FE)</i>	26.8
<i>Other income from overseas (FE)</i>	37.3
English language training	1,996.2
<i>Tuition fees</i>	879.5
<i>Other spending of overseas ELT students in the UK</i>	1,116.7
Qualification awarding bodies	17.5
Independent primary and secondary schools	478.9
Private sector training	1,480.0
Education-related publishing	749.0
Education-related equipment	453.0
Education-related consultancy	*
Education-related broadcasting	24.5
Total value of UK education and training exports	14,143.0
Total value of education-related Foreign Direct Investment	9.6

Note: * Due to the high risk of double-counting, a separate estimate for education-related consultancy is not provided. This does not mean that the value of education-related consultancy exports is nil, but rather that the value of such exports is included in other categories. Totals may not sum due to rounding.

Source: London Economics

In Table 65, we present the evolution of UK education-related exports in 2008/09 prices.

Table 65: Value of education and training exports to the UK economy (constant 2008/09 prices), 2004/05 - 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09
Higher Education	6,337.4	6,236.5	7,098.3	7,332.9	7,873.5
<i>Tuition fees</i>	1,905.1	1,908.4	2,102.9	2,206.7	2,442.3
<i>Other student spending</i>	3,479.9	3,486.8	4,040.9	4,097.4	4,344.9
<i>TNE</i>	211.0	206.0	211.6	216.9	210.8
<i>Research grants</i>	426.0	465.4	530.1	564.9	647.9
<i>Licensing IP</i>	23.5	23.4	23.1	25.6	46.6
<i>Consulting, facilities and equipment</i>	62.1	68.7	77.0	85.3	84.9
<i>Donations</i>	27.4	43.3	35.3	74.3	34.5
<i>Other income</i>	202.4	34.5	77.4	61.8	61.6
Further Education	1,092.30	1,090.30	1,055.80	1,067.60	1,070.30
<i>Tuition fees</i>	155.6	154.8	149.9	134.9	138.6
<i>Other student spending</i>	869.4	865.3	835.6	863.3	867.6
<i>TNE</i>	28.4	28.4	27.0	31.0	26.8
<i>Other income</i>	38.9	41.8	43.3	38.4	37.3
English language training	1,325.7	1,579.8	1,775.6	1,915.1	1,996.2
<i>Tuition fees</i>	568.0	675.4	759.5	816.0	879.5
<i>Other student spending</i>	757.7	904.4	1,016.1	1,099.1	1,116.7
Qualification awarding bodies	16.5	16.5	16.6	17.6	17.5
Independent schools	285.3	347.7	441.5	446.4	478.9
Private sector training	1,340.0	1,370.0	1,400.0	1,440.0	1,480.0
Education-related publishing	678.9	694.9	711.9	748.8	749.0
Education-related equipment	601.4	712.2	520.2	496.8	453.0
Education-related consultancy	*	*	*	*	*
Education-related broadcasting	24.5	24.5	24.5	24.5	24.5
Total value exports (2008/09 prices)	11,702.0	12,072.4	13,044.4	13,489.7	14,143.0
Total value of education-related FDI (2008/09 prices)			1.3	34.3	9.6

Note: Shaded cells indicate estimates based on an assumption of zero real growth. * Due to the high risk of double-counting, a separate estimate for education-related consultancy is not provided. This does not mean that the value of education-related consultancy exports is nil, but rather that the value of such exports is included in other categories. Totals may not sum due to rounding.

Source: London Economics

Comparison with *Pink Book* estimates

For completeness, it is interesting to compare our export expenditure estimates with educational (travel) export values reported in *The Pink Book*. For most activities, the educational component of exports is not identified separately, except for values based on the *International Passenger Survey (IPS)* data (and this is an aggregate of all of the different items). Only some of the building blocks of our estimate are covered by the IPS, so we only include those building blocks in common.

The Pink Book 2010 reports educational (travel services) exports (Table 3.3) of **£4.0 billion** in 2008 and **£3.8 billion** in 2009; allowing an estimate (midpoint) of **£3.9 billion** for

the academic year 2008/09. The comparable total estimate from our estimations is **£10.3 billion** [calculated as the sum of Higher Education tuition fees (£2,442.3 million), Other spending of overseas HE students in the UK (£4,334.9 million), Further Education tuition fees (£138.6 million), Other spending of overseas FE students in the UK (£867.6 million), English language training tuition fees (£879.5 million), Other spending of overseas ELT students in the UK (£1,116.7 million), and tuition and boarding fees of independent primary and secondary schools (£478.9 million)]. Therefore, the London Economics' estimate is more than twice the size of *The Pink Book* value based on the *IPS* data, highlighting the potential shortcomings of the border survey.

In Table 66, we provide a comparison of the estimates generated in the current report with those estimated by the other primary authors in the field (in 2008/09 prices).

Table 66: Value of education and training exports to the UK economy (£m), 2001-02 to 2008-09

Sector	Johnes (2004)	Lenton (2007)		LE (2010)
	2001/02	2002/03	2003/04	2008/09
Higher Education	4,571	5,705	6,484	7,873.5
- Tuition	1,431	2,063	2,344	2,442.3
- Other spending	2,121	2,483	2,939	4,344.9
- Transnational Higher Education	113	215	218	210.8
- Other Higher Education	906	944	983	875.5
Further Education:	705.0	1,332.0	1,340.0	1,070.3
- Tuition, excluding ELT	44	49	51	138.6
- Other spending, excluding ELT	346	528	555	867.6
- Other Further Education	315	755	734	64.1
English language teaching	1,493	1,132	1,223	1,996.2
Examination/professional bodies	172	189	220	17.5
Ind. primary and secondary	248	277	350	478.9
Private sector training	2,105	1,521	1,549	1,480.0
Publishing	1,059	1,510	1,568	749.0
Educational equipment	575	585	596	453.0
Consultancy (1)	13,418	16,133	16,827	*
Broadcasting	751	743	755	24.5
Total	25,096	29,126	30,913	14,143.0
Total excl. consultancy item (1)	11,678	12,993	14,086	14,143.0
Total value of education-related Foreign Direct Investment	-	-	-	9.6

Note: All figures have been adjusted for CPI and so are valued at 2008/09 prices. * Due to the high risk of double-counting, a separate estimate for education-related consultancy is not provided. This does not mean that the value of education-related consultancy exports is nil, but rather that the value of such exports is included in other categories. Totals may not sum due to rounding.

Source: London Economics, Johnes (2004), Lenton (2007)

UK share and demand growth of the global education exports market to 2020

Introduction

This section presents the forward-looking analysis covering Aim 2 (forecasts of growth in global demand for education exports to 2020 and beyond) and Aim 3 (forecasts of the UK's share of the global education exports market to 2020 and beyond). The objective of this analysis is to identify areas with strong future growth potential as sources of overseas income for UK-based institutions.

Forecasts of global demand and the UK's share to 2020 and beyond are based on a review and assessment of evidence from the following sources:

- historical patterns (taken from Aim 1)
- published literature, research reports and agency strategy documents
- expert and practitioner opinions (based on consultations and our bespoke survey); and
- national-level demographic projections

In the case of each activity, each of the above sources is considered in turn to generate a range of growth rate predictions for activity over the period to 2020. From this range, the most robust prediction is selected as the 'best' or 'central' estimate and value forecasts using the predicted growth rate are calculated (where possible). To provide more certainty for policy makers, we also undertake sensitivity analysis of our forecasts, considering both optimistic and pessimistic scenarios (also informed by the range of growth rate predictions). **Note that throughout the following analysis, we have rounded forecasts to zero decimal places to avoid creating the impression the figures are overly precise; however, have rounded validated figures (i.e. historical and baseline estimates derived in the previous section of the report) to one decimal place to provide as much detail as we think the data accurately supports.**

SWOT analysis of UK education exports

The Government's ultimate objective is to support UK institutions to increase and maximise UK education exports. Prior to the analysis of the export growth prospects of each individual activity, it is useful to first consider the Strengths, Weaknesses, Opportunities and Threats ('SWOT' analysis) for the achievement of that objective. This analysis will help inform the likely evolution of the UK share of the global market in each activity.

In a SWOT analysis, the Strengths and Weaknesses elements consider the internal factors that may put the UK education sector at an advantage and those that put it at a disadvantage in relation to expanding education-related exports. On the other hand, the Opportunities and Threats elements consider external factors that are favourable and unfavourable to the achievement of the objective.

A full-scale SWOT analysis is beyond the scale of this research, but a brief SWOT analysis is presented in the graphic below.

Figure 1: SWOT analysis of UK education exports



Source: London Economics

Higher Education

It is difficult to forecast the value of the global market in tuition fees or overseas spending of international students and the literature on this topic is sparse. However, there exist numerous studies looking at the international mobility of students in Higher Education, which is a key driver for tuition fee income and other spending from overseas sources.

Growth in global demand to 2020 and beyond

Baseline market size (2008/09)

To predict the current global market size, we have looked at data from a number of sources, of which the most comprehensive comes from the OECD. The OECD *Education at a Glance* report is published on an annual basis and compares indicators across countries on key topics in education, including student mobility. The most recent report, published in 2010, shows how the number of students enrolled outside their country of citizenship has grown substantially over the past decade, with an estimated **3.34 million** students studying abroad in 2008⁶⁷.

Projected market size (to 2020 and beyond)

There are a number of different ways in which the baseline market size could be projected to 2020 and beyond. The most basic method is to use historical data from OECD *Education at a Glance* and calculate the compound annual growth rate in student numbers to 2008. We arrive at a growth figure of 7.0% per annum for the entire market. If we assume this growth rate is constant over time, in 2020 the market will grow to **7.56 million** students studying abroad in 2020.

There are, however, a number of more sophisticated estimates of growth by the following authors. The British Council, Universities UK and IDP Australia focus on the demand for Higher Education in the UK and projections of this demand to 2020 in their research paper *Vision 2020* (2004). Under their baseline scenario⁶⁸, the authors predict that the global demand for international student places would increase to **5.8 million** in 2020, with some 511,000 wishing to study in the UK.

The IDP Global Student Mobility paper (2007) also looks at the global demand for international Higher Education, but arrives at a more conservative estimate than *Vision 2020*. The authors predict that in 2020, global demand for international Higher Education places will be **3.3 million** rising to **3.7 million** in 2025, corresponding to an annual compound growth rate of 2.7% between 2005 and 2025.

Both papers use the same market definition, but arrive at very different estimates. Therefore to decide whether the *Vision 2020* or the IDP estimate is likely to be more

⁶⁷ This only includes students for those countries that reported to the OECD or UNESCO Institute for Statistics, which includes all OECD countries plus Brazil, Estonia, Israel, Russia and Slovenia

⁶⁸ The base scenario assumes that the UK's relative performance with regard to each of the attractiveness factors remains fixed over the forecast period. Therefore, changes in demand result from compositional factors (demographic and economic changes and shifts in educational participation).

appropriate, we look at our baseline market size figure for 2008/09 of 3.34 million (OECD). We can see that the IDP figure has already been surpassed and is likely to be an underestimate (unless the international student market suddenly retracts) and it therefore seems more sensible to take the figure of British Council *Vision 2020* estimate of **5.8 million** as the projected market size in 2020.

Table 67 shows the forecasts of demand for international higher education from 2003 to 2020, as provided by *Vision 2020*. Asia is expected to contribute the most to the demand for international places, and also grow the fastest with a compound annual growth rate of 8.5%. Europe and Oceania are expected to grow at the slowest rates, at only 2.2% and 2.1% respectively. The projected compound annual growth in world demand for international student places is **6.2%**.

Our best estimate for the growth rate of global demand to 2020 is based on the British Council *Vision 2020* analysis and stands at **6.2%**, with student numbers reaching **5.8 million**.

Table 67: Forecasts of demand for international places, by region (in thousands)

	2003	2005	2010	2015	2020	Growth
Africa	225	250	321	409	525	5.1%
Middle East	133	147	185	233	291	4.7%
Asia	963	1,142	1,806	2,674	3,815	8.5%
Americas	172	182	212	247	285	3.1%
Europe	610	640	724	808	885	2.2%
Oceania	10	10	11	13	14	2.1%
Total	2,113	2,371	3,260	4,384	5,815	6.2%

Note: The growth is compound annual growth 2003-2020, calculated using the following formula: compound annual growth = (number in 2020/number in 2003)^{1/(2020-2003)}

Source: Table 3.3.1, Forecasts of global and regional demand for all international student places (000s), *Vision 2020*

Sources of growth

We now look at the sources of the likely growth in demand for international students. Vincent-Lancrin for the OECD (2009)⁶⁹ predicts that the number of Higher Education students worldwide is likely to continue at a fast rate outside the OECD and a moderate rate within the OECD. Therefore, the number of potentially mobile Higher Education students should increase, with China, India and Indonesia being the three main countries driving this growth. Moreover, he believes that this demand is unlikely to be rationed by institutions and governments.

Another paper by Vincent-Lancrin for the OECD (2009), *What is the impact of Demography on Higher Education Systems? A forward-looking approach for OECD*

⁶⁹ OECD 2009 Higher Education to 2030 Volume 2 Globalisation, chapter 2: cross border Higher Education: Trends and Perspectives.

countries considers how the changing demographic structure of countries will affect the demand for Higher Education. The majority of student enrolments in OECD countries come from the 18-24 age group, which is expected to fall on average by 9% by 2025⁷⁰. *Ceteris paribus*, demography affects student enrolments in Higher Education because the size of the 18-24 age group is the key determinant of the number of students. However, many other factors affect student enrolment rates, such as the cost of Higher Education and the opportunity cost of studying. If enrolment rates from domestic students are expected to decrease, then countries and institutions may be increasingly active in trying to attract international students to help stem this fall. This would then lead to an increase in demand from international students and the potential for an increase in the size of the global market.

Universities UK (2008)⁷¹ also look at the effect of demography on the demand for overseas education. Overall, the population of the other countries in the EU aged 18-20 is projected to decline by 14% over the next 20 years. On the other hand, the authors believe that the number of non-EU students enrolling in UK HEIs is 'unpredictable'. This is because these enrolments are related to the external global market where the UK competes with other countries for these students. Therefore, if there was an increase in the number of people aged between 18 and 20 in India, for example, it would be difficult to quantify the impact on global demand this would have.

In a paper published as part of Universities UK's *From Recession to Recovery* project, Crossick (2010) looks at the future of the Higher Education sector in the UK. He believes that international competition is likely to be important in the long term because the number of Higher Education students worldwide '*will continue to grow at a remarkable rate as will the number of those moving between countries for their Higher Education, with an increasing proportion doing so at the postgraduate level*'. However, the number of institutions, and particularly those teaching courses in English, is also likely to grow. Consequently, the global market for international students will become more competitive over time.

The intensity of competition in students, faculties and price was also noted by Hudzik (2010)⁷². Increased competition is a result of the increasing size and number of Higher Education institutions over time, with emerging economies responsible for the majority of this growth. Global international student mobility could increase to 7 million annually by 2025. This increase in capacity and demand may lead to a shift from elite to more widely accessible models across Higher Education systems, with students switching from traditional to non-traditional modes of study.

In summary, the majority of authors believe that demand for overseas education will increase over time. Moreover, the global education market is likely to become more competitive, with an expected increase in the number of institutions teaching in English and increasing demand for non-traditional modes of study.

⁷⁰ According to UN median demographic projections, cited by Vincent-Lancrin.

⁷¹ The future size and shape of the higher education sector in the UK: demographic projections.

⁷² The Economy, Higher Education and Campus Internationalisation, Hudzik (2010), *International Educator* May and June 2010.

Our best estimate for the growth of global demand for higher education to 2020 is based on the British Council Vision 2020 analysis and stands at 6.2%, with student numbers reaching 5.8 million in 2020.

UK share of the global market for student numbers to 2020 and beyond

Baseline share of student numbers (2008/09)

In 2008/09, the size of the global market for higher education was 3.34 million (estimated by the OECD). Moreover, the UK hosts approximately 335,000 overseas students, which corresponds to a **10%** share of the global market.

Projected share of student numbers (to 2020 and beyond)

With information on the current UK share of the global market for higher education students, we aim to estimate the UK's likely projected share over time. Using data from *Vision 2020*, Table 68 shows how the demand for international student places in the UK, as a share of all demand, is likely to fall gradually over time. In 2020, the United Kingdom might be expected to attract 511,000 international students to Higher Education Institutions, which represents 8.8% of the projected global demand from international students (5.8 million), equivalent to an annual growth rate of **4.7%**.

Table 68: Forecasts of demand for international student places (in thousands)

	2003	2005	2010	2015	2020	Growth
World	2,113	2,371	3,260	4,384	5,815	6.2%
UK	238	256	325	407	511	4.7%
UK Share	11.3%	10.8%	10.0%	9.3%	8.8%	-2.5 p.p.

Note: The growth is compound annual growth 2003-2020, calculated using the following formula: compound annual growth = (number in 2020/number in 2003)^{1/(2020-2003)}

Source: Table 3.3.1, **Forecasts of global and regional demand for all international student places ('000s)** and Table 3.51 **Forecasts of global and regional demand for international student places in the UK ('000s)** *Vision 2020*

The authors attribute this decline in market share to the fact that the UK has a relatively high share in less rapidly growing destinations, compared to other countries.

In addition, Universities UK⁷³ discuss how they believe the most vulnerable market segments for the Higher Education market in the UK are full-time UK undergraduates and international students from outside the United Kingdom. They estimate that there will be a **4.0%** growth in international students from outside the EU in UK Higher Education Institutions by 2026/27⁷⁴. However, if institutions seek to increase diversity with more liberal quality assurance regimes and the emergence of a significant private sector, this may lead to a lower valuation of the UK Higher Education brand in international markets.

⁷³ The future size and shape of the higher education sector in the UK: threats and opportunities.

⁷⁴ This is based on the Vision 2020 estimates.

Subsequently, the number of international undergraduate students may fall by up to 10 % compared to the baseline.

Overall, our best estimate of the UK's share of the international student market shows a decrease from 10.0% in 2010 to 8.8% in 2020.

Tuition fees

Forecasts of UK exports to 2020 and beyond

Given all the data we have gathered in the previous section on student numbers, we now look at forecasting UK tuition fee exports to 2020 and beyond.

Baseline forecast using historical information

The most basic method of forecasting is to take the historical trend calculated in Aim 1 and project this forward assuming a constant rate of growth. Table 69 shows the time series of tuition fee income from 2004/05 to 2008/09. Over this time period, compound annual growth was **6.4%**.

Table 69: Time series of tuition fee income, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09	Compound annual growth
Total non-UK minus scholarship (£ million) (2008/09 prices)	1,905.1	1,908.4	2,102.9	2,206.7	2,442.3	6.4%

Source: London Economics analysis (2008/09 prices)

Assuming growth of tuition fee income from overseas students remains constant over time (at 6.4%), total fee income is expected to reach £4,835 million in 2020 and £6,596 million per annum in 2025 (Table 70).

Table 70: Baseline forecasts of HE tuition fee income to 2025

	2010	2015	2020	2025
Total non-UK minus scholarship (£ million) (2008/09 prices)	2,598	3,545	4,835	6,596

Source: London Economics analysis (2008/09 prices)

Survey forecast

A second method of forecasting is to review and analyse the comments made by Tier 4 sponsors in response to the London Economics' survey. All 28 of the Higher Education Institution respondents said that fee income from overseas had growth potential. 26 Higher Education Institutions went on to answer the subsequent question on the annual growth rate of fee income. Table 71 shows that almost half of these respondents believed tuition fee income would grow at a rate greater than 10%.

Table 71: Annual growth rate of HE tuition fee income (survey)

	0-2%	2-5%	5-10%	>10%
Number of respondents	1	7	6	12

Note: Not all respondents who answered the question on the growth potential of fee income from overseas answered the question on the annual growth rate of fee income.

Source: London Economics Survey of Tier 4 sponsors

Since the greatest number of respondents answered with a growth rate of more than 10%, we take the lower bound estimate of this category, **10%**, and applying this to our baseline estimate from Aim 1. This results in the estimates for fee income in Table 72. Assuming growth of tuition fee income from overseas students remains constant at 10% over time (though this will in part reflect both increased numbers of students and increased fees in real terms), total fee income is expected to reach £6,968 million in 2020 and £11,222 million in 2025.

Table 72: Survey forecast of HE tuition fee income to 2025

	2010	2015	2020	2025
Total non-UK minus scholarship (£ million)	£2,686	£4,326	£6,968	£11,222

Source: London Economics analysis (2008/09 prices)

Respondents to the survey of Tier 4 sponsors were also asked for their views on the likely factors that might affect future growth of Higher Education student numbers and tuition fee income, either positively or negatively. The respondents were very similar in their views, with the following factors cited most often:

- HM Government immigration policy and visa regime
- currency exchange rates
- competition from overseas courses
- economic climate (domestic and global)
- HM Government policy more broadly (e.g. support)
- level of fees (relative to international competitors)
- employment conditions (i.e. hours) attached to student visa; and
- reputation of UK HEIs

Best estimate forecast

The sources above illustrate stronger growth rates than might necessarily prevail in reality. **Our best estimate for the forecasting of UK exports to 2010 and beyond uses our annual compound growth rate of 4.7% from *Vision 2020*.** We then assume that the growth in international student places is the same as the growth in tuition fee income, and apply 4.7% to our Aim 1 baseline figure of £2,442.3 million. Assuming the 4.7% annual growth rate remains constant, total fee income is expected to reach **£4,048 million** in 2020 and **£5,093 million** in 2025 (Table 73).

Table 73: Best estimate forecast of HE tuition fee income to 2025

	2010	2015	2020	2025
Total non-UK minus scholarship (£ million)	2,557	3,217	4,048	5,093

Source: London Economics analysis (2008/09 prices)

Other spending of overseas HE students in the UK

Forecasts of UK exports to 2020 and beyond

After reviewing the literature and data in the previous section, we now look at forecasting other spending of overseas HE students in the UK to 2020 and beyond.

Baseline forecast using historical information

Using a similar method for other spending, we first look at our historical trend in Table 74. From this trend we have calculated the compound annual growth rate to **be 5.7%**.

Table 74: Time series of HE student expenditure, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09	Compound annual growth
Overseas spending minus scholarship (£ million)	3,479.9	3,486.8	4,040.9	4,097.4	4,344.9	5.7%

Source: London Economics analysis (2008/09 prices)

Assuming this rate remains constant, we project that other spending will reach £8,001 million in 2020 and £10,559 million in 2025 (Table 75).

Table 75: Baseline forecast of HE student expenditure to 2025

	2010	2015	2020	2025
Overseas spending minus scholarship (£ million)	4,593	6,062	8,001	10,559

Source: London Economics analysis (2008/09 prices)

Best estimate forecast

As our best estimate of the growth in demand from international students for studying in the UK was **4.7%**, from *Vision 2020*, we apply this growth rate to non-tuition fee expenditure. Applying this to our 2008/09 baseline figure, we arrive at an estimate of **£7,201 million** in 2020 and **£9,060 million** in 2025 (Table 76).

Table 76: Best estimate forecast of HE student expenditure to 2025

	2010	2015	2020	2025
Overseas spending minus scholarship (£ million)	4,549	5,723	7,201	9,060

Source: London Economics analysis (2008/09 prices)

Transnational education (HE)

It is difficult to define and measure the transnational education market because it encompasses many different modes of education. Due to this complexity, research on transnational education is sparse, and this lack of information is reflected in the next section of this paper.

Growth in global demand to 2020 and beyond

Baseline market size (2008/09)

Attending an overseas campus of a Higher Education Institution is one mode of education that could be classed as transnational education. Universities UK collect data on international Higher Education in their *International Higher Education in Facts and Figures (summer 2010)* publication and find that in 2009 there were 162 Higher Education branch campuses operating globally, an increase of 43% from 2006. 10% of these branch campuses are a constituent part of UK Higher Education institutions.

Vincent-Lancrin (2009)⁷⁵ assesses the current and future trends in cross-border Higher Education and the international strategies employed by countries internationally. He finds that the international mobility of programmes and institutions has increased over time, especially towards Asia and the Middle East. The United Kingdom and Australia are the

⁷⁵ Cross Border Higher Education: Trends and Perspectives, Chapter 2, OECD Higher Education to 2030 Volume 2 Globalisation, 2009.

leaders in program mobility, where overseas students study a programme in a different country to that of the awarding institution. Jointly, the United Kingdom and Australia have approximately 300,000⁷⁶ students enrolled in their cross border programmes, the majority resident in Asia⁷⁷.

Due to the potential risks involved, institutional mobility (when an institution sets up a campus outside of their home country) has not grown as fast as program mobility. However, there have been recent developments in institutional mobility, such as the emergence of regional clusters of offshore campuses, such as the Knowledge Village in Dubai. Moreover, until recently universities self-financed their move abroad, whereas it is becoming increasingly common for local partners to fund them either through the provision of a campus or subsidising their move.

The Department for Innovation, Universities and Skills (2007) conducted a study of UK Higher Education Institutions (HEIs) views on TNE. Of the 135 HEIs that responded to the study, 65% offered TNE with 1,536 TNE programmes offered in total. The Open University had 34,239 students registered on TNE programmes in 2008 and there were approximately 280,000 TNE students registered in all HEIs. There are many factors that could influence the provision of TNE in the future, such as domestic provision of Higher Education in an overseas country.

Projected market size (to 2020 and beyond)

We have no concrete projections on the market size of TNE. However, UKCISA (2009)⁷⁸ expect that TNE numbers are likely to increase globally. This prediction is based on the belief that the capacity to accept traditional international students will become more limited and TNE is a cheaper alternative. Also, institutions are increasingly looking to make a mark outside their country in the global market.

Since we do not have much information to select from, we have assumed the UK's expected global share of the TNE market is **10%**, which is the same as the UK's share of HE branch campuses operating globally. Therefore, the size of the global market in TNE will be ten times our baseline figure for TNE calculated in Aim 1. This gives us a global market value of **£2,108 million** in 2008/09. In general, the authors expected TNE to grow over time. However, many different factors could affect this growth and we do not have enough information to make a robust estimate of the projected market size to 2020 and beyond.

⁷⁶ HESA data for 09/10 published Jan 2011 indicates more than 400,000 students are on UK TNE courses.

⁷⁷ McBurnie and Ziguras (2007) cited by Lancrin (2009).

⁷⁸ UKCISA Transnational Education and the Student Experience: a PMI Student Experience project report.

UK share of the global market to 2020 and beyond

Baseline share (2008/09)

We have taken the UK's expected global share of the TNE market to be 10%, which is the same as the UK's share of HE branch campuses operating globally (UUK). Despite not having a significant amount of information on TNE, we do have some information on the geographical drivers behind TNE demand. Tang and Nollent's (2007) report for the British Council⁷⁹ provides some insight into the UK's market share of transnational education in China and Hong Kong. In 2005, the UK had 43 Higher Education institutions involved in 115 degree programmes in China, obtaining the top position in terms of market share of 31%. This represents a massive increase in market share from the previous year, when the UK held only 5% of the market. The UK maintained this top position in 2006, retaining a 30% share of the TNE market in China (Table 77).

Table 77: UK's share of TNE HE programs in China, 2004 to 2006

	2004	2005	2006
Number of TNE programmes	164	378	119
Number of UK TNE	8	115	35
UK's share	5%	31%	30%

Note: the number of TNE programmes are defined as the number of TNE programmes awaiting approval by the MoE in that year

Source: UK-China-Hong Kong Trans-national Education Project, Report to the British Council, Tang and Nollent, January 2007

Additionally, the United Kingdom has preserved a significant market share in TNE provision in Hong Kong, with a 53% share in 2003 and 55% in 2006⁸⁰. A small number of institutions dominate UK TNE provision in Hong Kong, with 11 institutions accounting for 60% of the 617 programmes provided in 2006.

An Education UK and British Council paper⁸¹ looks at the market for TNE in Malaysia. The authors explain how the UK holds a 39.9% share of all TNE provision in Malaysia in 2007 with Australia holding a 28.2% share. The United Kingdom dominates in certain modes of TNE, such as professional qualifications and diploma programmes⁸². On the other hand, Australia dominates in full undergraduate degrees.

⁷⁹ UK-China-Hong Kong Trans-national Education Project, Report to the British Council, Tang and Nollent, January 2007.

⁸⁰ This share is based on all TNE provision from non-local institutions.

⁸¹ Malaysia, International Student Demand for Trans National Education (TNE) in Malaysia: Opportunities and Challenges for UK Education 2007.

⁸² Normally advanced standing programmes leading to completion of degree awards in the UK e.g. 2plus1

Table 78: UK's share of TNE HE programs

	2006	2007
China	30%	-
Hong Kong	55%	-
Malaysia	-	39.9%

Note: For Hong Kong, the share is based on all TNE provision from non-local institutions, so includes some non-HE provision

Source: UK-China-Hong Kong Trans-national Education Project, Report to the British Council, Tang and Nollent, January 2007, Malaysia, International Student Demand for Trans National Education (TNE) in Malaysia: Opportunities and Challenges for UK Education 2007

Projected share (to 2020 and beyond)

Compound annual growth for transnational education at UK HEIs from 2003 to 2020 is estimated at **9.1%** (*Vision 2020*). The highest growth is predicted in Asia, with the number of students undertaking transnational education at UK HEIs is expected to grow from 117,000 (2003) to 639,000 (2020).

There are a number of different factors that could affect the UK's market share for TNE in China and Hong Kong, especially increasing competition from other countries. Tang and Nollent (2007) note that '*competition is not simply a matter of number of players, but level of support as well as scope for innovation*' and go on to explain how Australia and France tend to provide greater governmental, financial and diplomatic incentives than the UK.

Moreover, a number of UK Higher Education Institutions believed the Hong Kong market was becoming saturated, thus suggesting there may be a need to diversify the portfolio of countries in which they provide TNE. Surprisingly, there was no evidence that UK institutions were affected by recent TNE regulations in China, and so this may not pose a problem again in the future. In Malaysia, the UK holds the largest share of TNE provision. However, the authors of the Malaysia TNE paper⁸³ note that '*as more programmes switch to multiple destinations, UK suppliers may find large programme coverage does not equate to student numbers and revenue return*'.

Our best estimate for the share of the UK in the global TNE market is 10% (Universities UK), with compound annual growth of TNE of 9.1% (derived from the British Council *Vision 2020* report). However, this growth is likely to differ by geographic region, with some areas growing at a faster rate than others. We cannot estimate the projected share of the UK to 2020 and beyond because we do not have enough information available to do this.

⁸³ Malaysia, International Student Demand for Trans National Education (TNE) in Malaysia: Opportunities and Challenges for UK Education, 2007

Forecasts of UK exports to 2020 and beyond

Baseline forecast using historical information

The most basic method of forecasting would be to take the historical trend calculated in Aim 1 and project this forward assuming a constant rate of growth. Table 22 shows the time series of TNE income from 2004/05 to 2008/09. Over this time period, compound annual growth was approximately zero. Assuming growth of tuition fee income from overseas students remains constant over time, total TNE income is expected to remain at £211 million in 2020 and 2025.

Survey forecast

The second method of forecasting is to review and analyse the comments made by Tier 4 sponsors in response to the London Economics Survey. Of those that responded to the London Economics' survey of Tier 4 sponsors, 12 respondents believed that there was growth potential from TNE whereas 8 believed there was no growth potential. Table 79 shows how there was a significant variation in opinion in relation to the annual growth rate of TNE income, with 5 respondents believing the growth was very low, between 0 and 2% and 2 respondents believing it was greater than 10%. Given the variation in responses and issues in relation to the representativeness of the sample, we do not think that extrapolating TNE income using this information source is sensible.

Table 79: Annual growth rate of TNE tuition fee income (survey)

	0-2%	2-5%	5-10%	>10%
Number of respondents	5	2	3	2

Source: London Economics Survey of Tier 4 sponsors

HEIs responding to our survey also expressed their views on the likely factors that might affect the future growth of student numbers and fee income from Higher Education transnational education, either positively or negatively. The following were the most cited factors:

- regulation (e.g. qualification awarding regulations)
- ability to secure facilities overseas
- capacity of overseas facilities
- competition from local overseas institutions
- international collaborations (e.g. bilateral agreements); and
- HM Government policy (e.g. support)

Best estimate forecast

We have based our best estimate of the size and growth of the transnational education market on the *Vision 2020* analysis. As such, compound annual growth for transnational education at UK HEIs from 2003 to 2020 is estimated at **9.1%** (*Vision 2020*). Although this growth rate appears relatively high, we believe that there is sufficient evidence supporting it. Applying this to our baseline estimate of income from TNE in 2008/09, and assuming this rate remains constant over time, we arrive at the forecasts presented in Table 80.

Table 80: Best estimate forecast for TNE tuition fee income to 2025

	2010	2015	2020	2025
Income from TNE (£ million)	230	356	550	849

Source: London Economics analysis (2008/09 prices)

Income from research grants, contracts and collaborations

Growth in global demand to 2020 and beyond

The size of the market for research grants and contracts is difficult to estimate because little literature on this topic exists. Moreover, we cannot use growth rate in student mobility numbers as a proxy for the growth rate in research, as research is not primarily driven by student mobility.

Baseline global market size (2008/09)

The only evidence that we have on the global market size of research grants, contracts and collaborations is from the OECD. Vincent-Lancrin (2009)⁸⁴ considers the current and future trends in academic research. In 2005, there were 35,000 international visiting scholars internationally, an increase from 13,000 in 1993. The share of internationally co-authored articles in the domestic scientific journal output was 44% for the UK in 2005, and in 2003 the UK collaborated with 158 different countries. The share of funding coming from abroad for the performance of academic research was 6% in 2006⁸⁵ and 8% for the United Kingdom.

From the limited information available, **we cannot estimate the baseline global market size of research in 2008/09.** There is no literature on the projected size of the research market to 2020 and beyond. Therefore, we cannot estimate the growth in global demand in the future.

⁸⁴ Chapter 5, OECD Higher Education to 2030, Volume 2, Globalisation.

⁸⁵ Based on 15 countries in the OECD that had data on this.

UK share of the global market to 2020 and beyond

We have no information on the UK's likely share of the global market in 2008/09, or the UK's projected share to 2020 and beyond.

Forecasts of UK exports to 2020 and beyond

Baseline forecast using historical information

The simplest method of forecasting would be to take the historical trend calculated in Aim 1 and project this forward assuming a constant rate of growth. Table 81 shows the time series of income received from research grants and contracts from 2004/05 to 2008/09. Over this time period, compound annual growth was 11.0%.

Table 81: Time series of income from research grants and contracts, 2004/05 to 2008/09

	2004/ 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09	Compound annual growth
Income received from research grants and contracts (£ million)	426.0	465.4	530.1	564.9	647.9	11.0%

Source: London Economics analysis (2008/09 prices)

Assuming growth of research income remains constant over time, total income from research is expected to reach **£2,052 million** in 2020 and **£3,466 million** in 2025 (Table 82).

Table 82: Baseline forecast for research grants and contracts to 2025

	2010	2015	2020	2025
Income received from research grants and contracts (£ million)	719	1,215	2,052	3,466

Source: London Economics analysis (2008/09 prices)

Survey forecast

A second method of forecasting is to review and analyse the comments made by Tier 4 sponsors in response to the London Economics' survey. Of those that responded to the Survey, 9 respondents believed that there was some growth potential for overseas research contracts whereas 6 believed there was no growth potential.

Table 83 shows how the 8 Higher Education Institutions responding to the question on the annual growth rate of income from research grants and contracts. The majority responded that the annual growth rate is between 0 and 5% (which represents a slight slowing compared to historical trends).

Table 83: Annual growth rate of income from research grants and contracts

	0-2%	2-5%	5-10%	>10%
Number of respondents	4	2	0	1

Source: London Economics Survey of Tier 4 Sponsors

Survey respondents were also asked which factors were likely to influence this growth rate. Respondents pointed to foreign government policy (e.g. restrictions on genetic research) and research funding budgets.

Taking 2% as the annual growth rate, which appears the most sensible option because the majority of respondents estimated that the growth rate was between 0 and 5%, provides an estimate of **£806 million** in 2020 and **£889 million** in 2025 for the projected income from research grants, contracts and collaborations (Table 84).

Table 84: Survey forecast for research grants and contracts to 2025

	2010	2015	2020	2025
Income received from research grants and contracts (£ million)	661	730	806	889

Source: London Economics analysis (2008/09 prices)

Best estimate forecast

There are substantial differences between the estimates of research income from overseas depending on whether we consider historical growth rates or survey responses going forward. The growth rates from the survey are from a very small sample, which could bias the results. However, historical growth rates do not incorporate the severity of the economic downturn and the potential impact of slower than trend economic growth on the demand for UK based research. We believe that using historical growth rates (with the implication that research grants and contracts will increase almost five-fold over the 15 years in real terms is implausible). As such, and despite the small sample sizes, **we have assumed that the best estimate for the value of research income from abroad is represented by the forecasts presented in Table 84 based on the survey evidence gathered from higher education providers.**

Other Higher Education components

For the other categories of export income generated by Higher Education institutions (spin-off and licensing activity, charitable donations and other sources of income), in the absence of any other information, we have assumed that the best estimate of future income to 2025 is based on historical growth rates. As such, we have assumed that overseas income growth from IP licensing is 2.9%⁸⁶, income growth from charitable

⁸⁶ We have estimated the growth of IP licensing using the annual compound growth between 2004/05 and 2007/08 (2.94%) rather than the annual compound growth between 2004/05 and 2008/09 (18.73%) because

donations stands at 5.9%, income from other sources stands at 12.3%, while income growth from consultancy and facilities and equipment is 11.0%.

Summary of Higher Education exports to 2025

Combining the various assumptions relating to potential growth rates for each of the components in the baseline estimate, we have forecasted the value of UK Higher Education exports to be approximately **£13,220 million** in 2020 and **£16,895 million** in 2025. This is presented in Table 85.

Table 85: Value of Higher Education and training exports to the UK economy, 2010-2025

	2008/09	2010	2015	2020	2025
Higher Education	7,873.5	8,245	10,412	13,220	16,895
<i>Tuition fees</i>	2,442.3	2,557	3,217	4,048	5,093
<i>Other student spending</i>	4,344.9	4,549	5,723	7,201	9,060
<i>Transnational Education</i>	210.8	230	356	550	849
<i>Research grants</i>	647.9	661	730	806	889
<i>Licensing IP</i>	46.6	48	55	64	74
<i>Consultancy, facilities, equipment</i>	84.9	94	159	267	450
<i>Donations</i>	34.5	37	49	65	86
<i>Other income</i>	61.6	69	124	221	394

Note: Totals may not sum due to rounding.

Source: London Economics analysis (2008/09 prices)

Further Education

Sources of growth in Further Education

In general, data on Further Education is more limited than for Higher Education. Consequently, it is more difficult to establish the size, and the United Kingdom's share, of the overseas tuition fee market in Further Education. Similar problems arise for the market for other spending by overseas students. However, the Association of Colleges (2008) look into the opportunities for UK Further Education and TVET providers in selected countries in their report *Going Global?*. In this paper, the authors review existing academic and policy related literature and interview a number of stakeholders and colleges about the opportunities for international FE provision in five main regions. These are China, India, the Russian Federation, Viet Nam and the United Arab Emirates.

The authors' (literature based) assessment of the potential income streams originating from China are promising, with many opportunities apparent for more in-country vocational programmes. Moreover, there appears to be a growing demand for distance learning, as

there was a large sale in shares of spin-offs in 2008/09 that was inflating the income from IP licensing (double that of the last 4 years) which appears to be an anomaly.

well as continuing professional development in the workplace, such as an increased need for teachers in secondary vocational schools to receive specialist training. China is seen as a key market for the Further Education sector by stakeholders. This is mainly because China continues to be a fast growing country which wishes its VET system to be reformed. There are, however, a few challenges that could affect the UK's opportunities in China. These include market access (due to the size of the country) and the importance of building relationships over time. However, despite these challenges, FE colleges see potential in delivering learning programmes in China, staff and student exchanges and commercial contracts for learning programmes.

The FE sector in India is currently very small, according to the authors. However, there are numerous opportunities for overseas education institutions, due to a large student-age population and an increasing need for vocational skills from employees. In 2006, the UK-India Education and Research Initiative (UKIERI) was launched, with the aim of developing educational links between India and the UK in three areas: Higher Education; schools; and professional and technical skills.

Some FE and VET level activities related to Financial Services and Creative Industries come under UKIERI and stakeholders noted that these existing links provide opportunities for FE colleges. Moreover, stakeholders see India as a key market; however, it is perceived that there is more demand for Higher Education rather than Further Education at the current time. Other challenges include issues of the affordability of Higher National Diplomas (HNDs), given domestic salaries, and the credibility of FE colleges in some sectors. However, FE colleges predict that there is some potential for engagement in commercial contracts, as well as teaching international students in the UK and abroad.

In Russia, there has been an increase in demand for the development of workforce skills provided by international education providers and short courses offered by FE institutions. The authors state that the UK has a comparative advantage over a number of other countries because it is closer to Russia (geographically) and has cultural connections. However, stakeholder's opinions on the opportunities in Russia are divided, with some looking at the Russian market with scepticism. Despite this, some United Kingdom based FE colleges have been supported by the Prime Minister's Initiative (PMI2 - a government initiative to promote UK international education) expanding into Russia. Notably, the main opportunity from Russia seen by FE colleges is Russian students coming to the UK to study.

The report suggests that there is scope for UK providers to engage in '*capacity building; training of teachers; delivery of courses; and participation in joint projects*' in Viet Nam. Moreover, under PMI2 there have been opportunities for colleges that already have relationships with colleges in Viet Nam to bid for FE partnership projects globally. Stakeholders believe that there are good opportunities for the UK in Thailand, Laos and Viet Nam, as these countries are seen to be extending their education systems. In addition, FE colleges see the most potential coming from teaching Vietnamese and Thai students in the United Kingdom.

Finally, the authors consider the United Arab Emirates (UAE). The vocational education sector is small in the UAE and needs to be restructured according to the literature. Currently, there is a mismatch between skills required and those available, and the provision of enhanced vocational and technical education could help alleviate the problem.

These opportunities could be captured by the United Kingdom, especially when funding to support partnerships between the United Kingdom and the UAE become more readily available (from the PMI2 initiative) in 2008 and 2009. Stakeholders believed that the Gulf States offer strong opportunities, mainly because there was a need for better preparation for going in to employment. In addition, compared to other countries, there are more opportunities to obtain funding from large corporate entities in the Gulf States. Despite this, FE colleges are expecting a sharp drop in international student recruitment in the future; however, the number of learning programmes delivered abroad is expected to increase.

Growth in global demand to 2020 and beyond

We have been unable to identify any quantitative literature on the size of the global market in Further Education fee income or other spending from overseas sources.

UK share of the global market to 2020 and beyond

We have limited information on the UK's share of the global market in overseas Further Education provision, or the UK's share to 2020 and beyond. However, in 2007, the Association of Colleges surveyed Further Education colleges across the UK to assess their activity in the international market⁸⁷. Of the 98 responses, 71% said that teaching students from outside the UK will be their fastest growing activity in the next 5 years.

Tuition fees

Forecasts of UK exports to 2020 and beyond

Despite our lack of information in the global market for Further Education, we can estimate how tuition fee income from overseas students in Further Education is likely to grow in the UK to 2020 and beyond using a number of different methods.

Baseline forecast using historic information

The simplest way to forecast tuition fee income over time would be to look at our historical data from Aim 1 and calculate the compound annual growth rate from this data. Table 86 shows us that the growth rate, based on historical data, is **-2.9%**.

Table 86: Time series of FE tuition fee income, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09	Compound annual growth
Tuition fee income from overseas (£ million)	155.6	154.8	149.9	134.9	138.6	-2.9%

Source: London Economics analysis (2008/09 prices)

⁸⁷ Going global? UK FE/TVET – opportunities in the international market, Association of Colleges, 2008.

Assuming that this growth rate stays constant over time, we can estimate the value of tuition fee income in the future. Tuition fee income originating from overseas is estimated to be **£100 million** in 2020 and **£87 million** in 2025 (Table 87).

Table 87: Baseline forecast of FE tuition fee income to 2025

	2010	2015	2020	2025
Tuition fee income from overseas (£ million)	134	116	100	87

Source: London Economics analysis (2008/09 prices)

Survey Forecast

It is also possible to consider the results from our survey to help us forecast the tuition fee income from overseas to 2020 and beyond. From the 22 respondents to our question on the annual growth rate of fee income, 12 believed that the growth rate was likely to be greater than 10% (Table 88).

Table 88: Annual growth rate of FE fee income (survey)

	0-2%	2-5%	5-10%	>10%
Number of respondents	0	3	7	12

Source: London Economics Survey of Tier 4 Sponsors

Further Education Colleges responding to our survey were asked for their views as to the factors that are likely to influence this growth rate. The following factors were the most cited factors:

- HM Government Immigration policy and visa regime;
- HM Government policy more broadly (e.g. support);
- Exchange rates;
- FE College management dynamism;
- international collaborations;
- level of fees (relative to international competitors); and
- marketing by UK FE Colleges

Taking the lower bound, of 10%, we can project forward our baseline estimates from Aim 1 to 2025. This gives us an estimate of £395 million in 2020 and £636 million in 2025, as provided in Table 89 overleaf.

Table 89: Survey forecast of FE tuition fee income to 2025

	2010	2015	2020	2025
Tuition fee income from overseas (£ million)	152	245	395	636

Source: London Economics analysis (2008/09 prices)

Best estimate of tuition fee income

There is no independent information on the likely growth in overseas students coming to the UK to study for Further Education courses; however, we can use the historical trend in student numbers and project this forward. **Using data on overseas students provided by the British Council (which was used to derive the baseline estimate of student numbers), our best estimate assumes that compound annual growth is -3.2% per annum for all non-UK students (Table 90).**

Table 90: Time series of overseas FE student numbers, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09	Compound annual growth
Non-EU students	45,850	40,160	37,955	36,040	40,760	-2.9%
Non-UK EU students	41,995	47,015	46,385	40,740	36,405	-3.5%
Total Non-UK	87,845	87,175	84,340	76,785	77,165	-3.2%

Note: before the year 2007/08, Bulgaria and Romania were included in the Non-EU student total, whereas in 2007/08 and 2008/09 they were included in the Non-UK EU total.

Source: British Council

Under the assumption that this growth rate in student numbers remains constant, and that the average fee per student remains the same (in real terms), we reach an estimate of the income from overseas students participating in Further Education of **£92 million** in 2020 and **£78 million** in 2025 (Table 91).

Table 91: Best estimate FE tuition fee forecasts to 2025

	2010	2015	2020	2025
Total Non-UK tuition fee income (£ million)	127	108	92	78

Source: British Council estimates applied to our baseline 2008/09 figure from Aim 1. (2008/09 prices)

Other spending of Further Education overseas students in the UK

Forecasts of UK exports to 2020 and beyond

We use similar methods to forecast other spending of FE overseas students in the UK to 2020 and beyond.

Best estimate forecast

Using historical overseas student numbers from the British Council, as before, gives us a compound annual growth rate of -3.2% (Table 90). If we assume that this growth rate does not change over time, then Table 91 shows that overseas spending is expected to decline to **£607 million** in 2020 and **£516 million** in 2025.

Table 92: Best estimate forecasts of other education related spending to 2025

	2010	2015	2020	2025
Overseas spending (£m)	840	714	607	516

Source: London Economics analysis (2008/09 prices)

Transnational education (FE)

There is no existing literature on the size of the global market in transnational education related to Further Education. Moreover, we have limited information on the UK's share of the global market in transnational Further Education provision, or the UK's share to 2020 and beyond.

Forecasts of UK exports to 2020 and beyond

We now forecast the value of transnational education to 2020 and beyond, using a variety of different methods.

Baseline forecast using historic information

Using historical information to forecast income from transnational education to 2020 and beyond results in a compound annual growth rate of -1.4% (Table 93).

Table 93: Time series of FE TNE tuition fee income, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09	Compound annual growth
Income from TNE (£m)	28.4	28.4	27.0	31.0	26.8	-1.4%

Source: London Economics analysis

Assuming that this growth rate stays constant over time, we can estimate the value of income from transnational education in the future. Income originating from overseas is estimated to be £23 million in 2020 and £21 million in 2025 (Table 94).

Table 94: Baseline forecasts of FE TNE tuition fee income to 2025

	2010	2015	2020	2025
Income from TNE (£m)	26	25	23	21

Source: London Economics analysis

Best estimate forecast

Given the relatively limited information available, we believe that the forecast based on historical trends (the baseline case) provides the best estimate of the value of transnational education going forward (Table 94).

Other Further Education components

For other sources of income generated by Further Education Colleges, we have assumed that the best estimate of future income to 2025 is based on historic growth rates. As such, we have assumed that overseas income growth from other sources stands at -1.0%.

Summary of Further Education exports to 2025

Based on these assumptions, we have forecasted the value of UK Further Education exports to be approximately **£755 million** in 2020 and **£647 million** in 2025. This is presented in Table 95.

Table 95: Value of Further Education and training exports to the UK economy, 2010-2025

	2008/09	2010	2015	2020	2025
Further Education	1,070.3	1,030	882	755	647
<i>Tuition fees</i>	138.6	127	108	92	78
<i>Other student spending</i>	867.6	840	714	607	516
<i>Transnational Education</i>	26.8	26	25	23	21
<i>Other income</i>	37.3	37	35	34	33

Note: Totals may not sum due to rounding.

Source: London Economics analysis (2008/09 prices)

English Language training

Tuition fees

The main source of information on the global market of ELT tuition fees, and the UK's share of this market, is the Language Travel Magazine.

Growth in global demand to 2020 and beyond

Baseline market size (2008/09)

The Language Travel Magazine undertakes an analysis of the global market of English Language Training annually. In 2009, the global English language market is estimated to be worth US\$11,735 million in revenue terms. This equates to approximately **£8,413 million**. The size of the market has increased by approximately 3.2% per annum over the previous four years, although there has been a small reduction in the total size of the global ELT market between 2008 and 2009.

Projected market size (to 2020 and beyond)

Using historical data from the Language Travel Magazine, we can also estimate the projected market size to 2020 and beyond. Firstly, we take the historical data and calculate the compound annual growth rate, which is estimated to be 3.2% (presented in Table 96).

Table 96: Time series of global ELT tuition fee income, 2004/05 to 2008/09

	2005	2006	2007	2008	2009	Compound annual growth
Tuition fee revenue (£ million)	£7,428	£7,147	£7,715	£8,722	£8,413	3.2%

Source: London Economics analysis of Language Travel Magazine data

Assuming that this growth rate remains constant over time, we can then predict the size of the global market for English language training tuition fee income to 2020 and beyond. Table 97 shows that the ELT market is expected to reach £11,851 million in 2020 and £13,848 million in 2025.

Table 97: Forecast of ELT tuition fee income to 2025

	2010	2015	2020	2025
Tuition fee revenue (£m)	£8,680	£10,142	£11,851	£13,848

Source: London Economics analysis

UK share of the global market to 2020 and beyond

Baseline share (2008/09)

In 2009, the Language Travel Magazine reported that the UK had the largest share of revenues in the English language training market, of 37.1%.

Projected share (to 2020 and beyond)

Although the UK's share of the ELT global market reached approximately 53.9% in 2005, in the last 4 years, the share has stayed relatively constant, ranging between 33% and 38% (Table 98). This suggests that the UK's share is unlikely to move from this range in the short term.

Table 98: Time series of UK share of ELT global market, 2004/05 to 2008/09

	2005	2006	2007	2008	2009
UK share	53.9%	37.8%	33.2%	34.7%	37.1%

Source: Language Travel Magazine, November 2010, November 2009, November 2008, November 2007 and October 2006.

Forecasts of UK exports to 2020 and beyond

Baseline forecast using historic information

The most basic method of forecasting would be to take the historical data from Aim 1 and project this forward assuming a constant rate of growth. Table 99 shows the time series of ELT tuition fee income from 2004/05 to 2008/09. Over this time period, compound annual growth was 11.6%.

Table 99: Time series of ELT tuition fee income, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09	Compound annual growth
Tuition fee income (£m)	568.0	675.4	759.5	816.0	879.5	11.6%

Source: London Economics analysis (2008/09 prices)

Under the assumption that the compound annual growth rate of 11.6% remains constant over time, we can forecast tuition fee income to 2020 and beyond. In 2020, ELT tuition fee income is expected to be £2,927 million, while in 2025, it is expected to reach £5,055 million.

Survey forecast

Another forecasting method used is the analysis of our survey results. From the 64 respondents to our question on the annual growth rate of fee income, 22 believed that the growth rate would be between 5 and 10% and 24 thought it was greater than 10% (Table 100). However, one respondent believed that the annual growth rate of tuition fee income would be negative (-5%). It is also important to note that these beliefs relate to total revenue (which is the combination of tuition fees and student numbers), and not just expectations in relation to student numbers.

Table 100: Annual growth rate of tuition fee income

	-5%	0-2%	2-5%	5-10%	>10%
Number of respondents	1	3	14	22	24

Source: London Economics analysis

English language training schools responding to our survey also gave their views on the likely factors that might affect future growth of student numbers and language training fee income, either positively or negatively. A strong common theme emerged in responses, with the majority of respondents pointing to visa issues as the main threat to the sector. Language schools indicated that the possibility of a cap on non-EU student visas and the frequency of changes in the requirements of the UK immigration regime will make the UK a less attractive destination for potential language training students, and that the burden of ensuring compliance with visa regulations could force some schools to close. The full range of most commonly cited factors are listed below and overleaf:

- HM Government Immigration policy and visa regime;
- capacity of schools;
- access to accommodation;
- investment;
- global economic climate;
- demand for English language skills globally;
- safety, terrorism or health scares;
- HM Government policy more broadly (e.g. support);
- UK military operations;
- currency exchange rates;
- competition from overseas courses;
- UK image and reputation abroad;
- events (e.g. Olympics, Royal wedding, etc.);
- demographics of feeder countries; and
- growth from emerging markets (including China and Russia)

Best estimates

Combining the information on the expected growth of the English Language Training tuition fee income globally (3.2%) from ELT trade publications, and combining this information with the assumption that the United Kingdom's share of the global market remains at 37.1% (2008/09 levels), this suggests that the forecast tuition fee income from ELT going forward will be **£1,244 million in 2020 and **£1,456 million** in 2025.**

Table 101: Forecast of ELT tuition fee income to 2025

	2010	2015	2020	2025
Tuition fee revenue (£m)	908	1,062	1,244	1,456

Source: London Economics analysis (2008/09 prices)

Other spending of overseas ELT students in the UK

Forecasts of UK exports to 2020 and beyond

Best estimates

There is relatively little information on the expected export led non-tuition fee expenditure that might be expected to be generated over the next 15 years. However, given the possible implications of the Coalition government's immigration policy, as well as the fact that the wider industry-led expectations of the growth in student numbers are considerably smaller (3.2%), we believe that the extrapolation of historical trends may be over-optimistic. Similarly, despite the fact that almost three quarters of ELT school providers believed that the short-to-medium term that the growth in student numbers would be greater than 5%, we believe that the best estimate of the future growth of non-tuition fee expenditure should mirror the assumption relating to the growth in student numbers. We have therefore assumed that this growth rate stands at **3.2%** per annum. Based on expectation of growth, we have estimated non-tuition fee expenditure generate from abroad by individuals studying in English language schools to be **£1,579 million** in 2020 and **£1,848 million** in 2025. This is presented in Table 102.

Table 102: Best estimate forecasts of non-tuition fee expenditure by ELT students to 2025

	2010	2015	2020	2025
Non tuition fee expenditure (£m)	1,152	1,349	1,579	1,848

Source: London Economics analysis (2008/09 prices)

Summary of English Language Training exports to 2025

Based on these assumptions, we have forecasted the value of UK English Language Training education exports to be approximately £2,823 million in 2020 and £3,304 million in 2025. This is presented in Table 103.

Table 103: Value of English Language training exports to the UK economy, 2010-2025

	2008/09	2010	2015	2020	2025
English Language Training	1,996.2	2,060	2,411	2,823	3,304
Tuition fees	879.5	908	1,062	1,244	1,456
Other student spending	1,116.7	1,152	1,349	1,579	1,849

Note: Totals may not sum due to rounding.

Source: London Economics analysis (2008/09 prices)

Other education-related activities

For a number of other sectors, there is little or no existing literature on the size, or the UK's share, of the global market. Moreover, we do not know how each of these sectors and their respective global markets will evolve in the future. For this reason, we in general rely on forecasts based on the **historical** time series estimated as part of our baseline

analysis; however, we use alternative sources of information when considering fee income to independent primary and secondary schools and educational equipment.

Forecasts of UK exports to 2020 and beyond

Baseline forecasts using historic information

Table 104 shows a time series of income for each of the remaining sectors based on data from Aim 1. From this, we can calculate the baseline forecasts by estimating the compound annual growth rate and projecting the historical data forward. For most of the other sectors, the growth rate is positive and it is highest for independent primary and secondary schools, at 13.8%. However, the growth rate for educational equipment was negative, standing at -6.8%.

Table 104: Time series of income from other education related activities, 2004/05 to 2008/09

	2004/05	2005/06	2006/07	2007/08	2008/09	Compound annual growth
Qualification awarding bodies income	16.5	16.5	16.6	17.6	17.5	1.5%
Primary/Secondary tuition fee income	285.3	347.7	441.5	446.4	478.9	13.8%
Private sector training income	1,340.0	1,370.0	1,400.0	1,440.0	1,480.0	2.5%
Education related publishing exports	678.9	694.9	711.9	748.8	749.0	2.5%
Educational products and equipment	601.4	712.2	520.2	496.8	453.0	-6.8%
Consultancy	*	*	*	*	*	
Broadcasting	24.5	24.5	24.5	24.5	24.5	0%

Source: London Economics analysis (2008/09 prices)

Assuming these growth rates remain constant in the future, we can estimate the value of overseas income to each sector to 2020 and beyond, as shown in Table 105. Qualification awarding bodies' income is forecast to be **£21 million** in 2020 and **£22 million** in 2025. In 2020, private sector training income is expected to be **£1,941 million** while in 2025, it is expected to reach **£2,197 million** and exports related to educational publishing are forecast to reach **£983 million** in 2020 and **£1,112 million** by 2025.

Using historic information, tuition fee income to independent primary and secondary schools is expected to reach £1,985 million in 2020 and exceed £3,000 million by 2025, while exports of educational equipment are expected to decline to £208 million and to £146 million by 2025. In relation to tuition fee income to independent primary and secondary schools and educational equipment, we believe that the estimates based on historic information are not fully realistic, so we amend these two categories based on other information we have gathered.

Table 105: Forecasts of export income from other education related activity to 2025

	2010	2015	2020	2025
Qualification awarding bodies income	18	19	21	22
Private sector training income	1,517	1,716	1,941	2,197
Education related publishing exports	767	868	983	1,112
Consultancy	*	*	*	*
Broadcasting	25	25	25	25

Source: London Economics analysis

Survey forecasts

The survey responses from independent primary and secondary schools were much more cautious than the estimates generated through a simple interpolation of historical data. Compared to the growth estimate using historic information of 13.8%, of the 8 responses from independent secondary schools, 3 respondents believed that the annual growth rate of fee income was in the 5-10% range while 4 thought it was between 2 and 5%.

Table 106: Annual growth rate of training fee income

	0-2%	2-5%	5-10%	>10%
Private training providers number of respondents	3	2	3	11
Primary and Secondary school, number of respondents	1	4	3	0
FDI, number of respondents	8	5	6	13

Source: London Economics analysis

Other sources of estimate – independent primary and secondary schools

There are some other potential sources of information to estimate export income going forward. For example, the ISC annual census 2010 notes that there has been a 7.4% rise in the number of non-British pupils with parent's resident overseas compared with the year before⁸⁸.

Assuming that the 7.4% rise in student numbers is the main driver behind tuition fee income, **we assume that there is a constant annual growth rate of 7.4% in tuition fee income**. Applying this rate to our baseline estimate from Aim 1 (£478.9 million) and projecting it forward to 2020 and beyond, gives us the results shown in Table 107. **We use this alternative growth rate as the best estimate for independent primary and secondary schools.**

⁸⁸ In addition, Hong Kong and China make up 36.1% of all non-British students coming to ISC schools, with Europe also accounting for a large share, approximately 32%. The fastest growing markets are India, Pakistan, Sri Lanka, Bangladesh and the Far East, as well as the Middle East. On the other hand, there has been a large drop in the number of students coming from Japan.

Other sources of estimate – educational products and equipment

The British Educational Supply Agency provided us with some data on forecasts of the UK export market for education products and services. This is also provided in Table 107. Between 2011 and 2015, there is an expected compound 6% increase, which decreases to a compound 4% annual increase between 2015 and 2020. BESA state that the reduction from 2015 anticipates a change in Sterling value and expectation of the UK economy improving. Before 2015, the higher compound annual rate reflects the expectation that discussions with UKTI will lead to enhanced support for the educational sector, which will boost business. We use this growth path as the best estimate for education equipment.

Table 107: Forecasts of independent schooling and educational related equipment to 2025

	2010	2015	2020	2025
Independent school tuition fee income (£m)	514	735	1,050	1,501
Educational related equipment (£m)	507	567	716	871

Source: London Economics analysis, British Educational Suppliers Association (2008/09 prices)

Best estimates

In the absence of better or more consistent information, and with the exception of independent primary and secondary schools and education related equipment and supplies, we have forecasted future education related exports using historical growth rates. In the case of independent primary and secondary schools, we have assumed a more conservative level of growth than the historical estimates imply (7.4% rather than 13.8%) as we do not believe that either the future demand from overseas will be as strong as has been the case over the last 5 years or that the sector has the supply capacity necessary to facilitate these high historical levels of growth over the next 15 years. In the case of educational supplies, we have taken a positive (though decreasing) growth rate from BESA to forecast forward expected export income relating to the provision of educational equipment and supplies. This is presented in Table 108.

Table 108: Value of other education-related exports to the UK economy, 2010-2025

Sector	2008/09	2010	2015	2020	2025
Other Education-related activity	3,202.9	3,348	3,930	4,736	5,727
Qualification awarding bodies	17.5	18	19	20	22
Ind. primary/secondary schools	478.9	514	735	1,050	1,501
Private sector training	1,480.0	1,517	1,716	1,941	2,197
Education-related publishing	749.0	768	869	983	1,112
Education-related equipment	453.0	507	567	716	871
Education-related consultancy	*	*	*	*	*
Education-related broadcasting	24.5	25	25	25	25

Summary of forecasts

In Table 109, we present the aggregated forecasts of the value of education export to the United Kingdom. Again it is important to caveat some of the results and to stress that there will always be some degree of uncertainty associated forecasting – especially so far into the future. Relatively minor assumption in relation to the suggested growth rate adopted to predict future income streams may have significant monetary impacts.

The analysis suggests that from the current baseline of **£14.1 billion**, the value of the education related export market might be approximately **£21.5 billion** in 2020 and **£26.6 billion** in 2025 (both in 2008/09 prices). This represents an annual growth rate of approximately 4.0% per annum in real terms.

Table 109: Value of education related exports to the UK economy, 2010-2025

Sector	2008/09	2010	2015	2020	2025
Higher Education	7,873.5	8,245	10,412	13,220	16,896
<i>Tuition fees</i>	2,442.3	2,557	3,217	4,048	5,093
<i>Other student spending</i>	4,344.9	4,549	5,723	7,201	9,060
<i>Transnational Education</i>	210.8	230	356	550	849
<i>Research grants</i>	647.9	661	730	806	889
<i>Licensing IP</i>	46.6	48	55	64	74
<i>Consultancy, facilities, equipment</i>	84.9	94	159	267	450
<i>Donations</i>	34.5	37	49	65	86
<i>Other income</i>	61.6	69	124	221	394
Further Education	1,070.3	1,030	882	755	647
<i>Tuition fees</i>	138.6	127	108	92	78
<i>Other student spending</i>	867.6	840	714	607	516
<i>Transnational Education</i>	26.8	26	25	23	21
<i>Other income</i>	37.3	37	35	34	33
English Language Training	1,996.2	2,060	2,411	2,823	3,304
<i>Tuition fees</i>	879.5	908	1,062	1,244	1,456
<i>Other student spending</i>	1,116.7	1,152	1,349	1,579	1,849
Qualification awarding bodies	17.5	18	19	20	22
Ind. primary/secondary schools	478.9	514	735	1,050	1,501
Private sector training	1,480.0	1,517	1,716	1,941	2,197
Education-related publishing	749.0	768	869	983	1,112
Education-related equipment	453.0	507	567	716	871
Education-related consultancy	*	*	*	*	*
Education-related broadcasting	24.5	25	25	25	25
Total value of education exports	14,143.0	14,684	17,636	21,533	26,575

Note: Totals may not sum due to rounding.

Source: London Economics analysis (2008/09 prices)

Analysis of policy changes to UK education exports

Our estimates so far do not take into account any policy changes that may be implemented by the Coalition government in the future, the policies of any future government nor the impact of wider international economic or geopolitical events. However, we believe there are two forthcoming proposals or policies that could have an adverse effect on the growth of the education exports market in the UK.

Immigration policy

The first of these is a proposed change in immigration policy. Only non-EU students have to apply for a student visa to study in the United Kingdom, since students from the European Economic Area and Switzerland do not need to apply for a Tier 4 student visa under current EU legislation. Currently, there are two ways in which non-EU students can enter the United Kingdom for study purposes: the Tier 4 route and the Student Visitor route. Students who wish to study in the United Kingdom for longer than 6 months have to apply via the Tier 4 student visa route, whereas the Student Visitor route is for those applying for a course less than 6 months in length⁸⁹. In December 2010, the UK Border Agency published its consultation on the student immigration system with proposed changes to the Tier 4 route. The main proposals included:

- Restricting Tier 4 largely to degree-level courses and child students, with only Highly Trusted Sponsors permitted to offer below degree level courses to adults. Highly Trusted Sponsors are defined as Tier 4 sponsors that *'have a proven track record of recruiting genuine students who comply with the UK's immigration rules.'*
- Raising the Tier 4 language bar for both non-English language and English language courses. This means that overseas students intending to study in the UK will have to demonstrate a higher level of English skills than was previously the case.
- Other changes include the removal of the Tier 1 Post Study Work route and the introduction of more limited entitlements to work for all course levels.

These proposals suggest that the criteria for qualifications at NQF level 6 or higher (degree level and above) will not change. Therefore, **only** institutions that supply below degree level courses are likely to see a direct effect of the immigration policy on their student numbers, such as publicly or privately funded HE/FE institutions and English

⁸⁹ On January 10th 2011, the government extended the Student Visitor route, allowing students to stay for up to 11 months. This will mainly affect students taking shorter ELT courses, rather than FE or HE students.

Language schools⁹⁰. On the other hand, Universities and Independent schools will generally be unaffected directly.

Modelling the effects of a change in immigration policy

In December 2010, the Home Office published their paper, *Overseas students in the immigration system: Types of institution and levels of study*. The main aim of this paper was 'to provide estimates of the proportion of non-EEA students required to apply for visas under Tier 4 of the Points Based System, who are coming to study in the UK at different types of institution and at different levels.'⁹¹ Moreover, the authors aim to assess the degree of compliance from students and how this differs by institution type.

The main aim of the proposed changes in Tier 4 entry requirements is to prevent students who say they are coming to study in the UK and but then do not comply with the rules of their visa (for example, not attending their course). Consequently, to assess the effect of the proposed immigration policy on non-EU student numbers, we calculated the current maximum number of students that are non-compliant, and then take this away from the total number of non-EU students under Tier 4. This would give us the least number of students that could enter the UK, assuming the policy change has worked and full compliance occurs.

To achieve this, we calculate the number of non-EU students there are in each type of institution, based on the proportion of Confirmation of Acceptance for Studies (CAS) assigned to each type of institution. Currently, using survey information from the Home Office, universities have the highest proportion of CASs, at 51%, with privately funded HE/FE institutions holding 34%, publicly funded HE/FE institutions at 6%, English language schools at 7% and independent schools at 2%⁹². Based on the fact that the number of non-EU students coming to study in the UK for the year up to September 2010 was 355,065⁹³, this means that approximately 120,722 students went to privately funded HE/FE, 21,304 students studied at publicly funded HE/FE and 24,855 at English Language schools (the three types of provider most affected by the policy).

From a survey of 17,034 CASs, the Home Office estimate the percentage of students that are above and below degree level at each type of institution (Table 110). It can be seen that 66% of students at publicly funded HE/FE institutions undertake sub-degree level courses, while the proportion for privately funded HE/FE and English Language schools is 58% and 100% respectively. This implies that the number of students that are on a below degree course are 14,061, 70,019 and 24,855 for public HE/FE, private HE/FE and English Language schools respectively.

⁹⁰ For courses of greater than 12 months.

⁹¹ Page 3, *Overseas students in the immigration system: Types of institution and levels of study*, Home Office.

⁹² Table 1: Analysis of the sponsor register, by type of institution, *Overseas students in the immigration system: types of institution and levels of study*, Home Office.

⁹³ ONS Migration Statistics Quarterly Report, No.7: November 2010, <http://www.statistics.gov.uk/pdfdir/mig11110.pdf>.

Table 110: Non-EEA students sponsored to study in the UK by establishment type and level of study, 2010

	Above degree		Below degree		
	PG (NQF Level 7)	UG (NQF 6)	NQF Level 5	NQF Level 4	<= NQF Level 3
Universities	57%	30%	7%	1%	5%
Publicly funded HE/ FE institutions	25%	10%	23%	3%	40%
Privately funded HE/ FE institutions	15%	28%	20%	25%	13%
English language schools	0%	0%	18%	2%	80%
Independent schools	0%	0%	0%	0%	100%

Source: Table 3: Estimated percentages of non-EEA students sponsored to study in the UK by establishment type and level of study, 2010 (from a survey of 17,034 CASs), Overseas students in the immigration system: type of institution and levels of study, Home Office

We have the total number of students at each type of institution and those that study below degree level courses. We can also calculate the number of students that are potentially non-compliant by using figures from the Home Office's survey on non-compliance. Privately funded HE/FE institutions have the highest level of potential non-compliant students, with 26% of non-EU students having no record of leaving the UK and no valid reason to remain. This figure is 14% for English Language schools and 8% for publicly funded HE/FE.

If we take all students (irrespective of level) into consideration, the total number of non-complying students at the three types of institution is **36,572**, approximately 10% of the total number of non-EU students. This leaves 318,493 students who are compliant and this would be the minimum number of non-EU students coming to the UK in one year. However, if we focus our attention solely on sub-degree level students (since they are most likely to be affected by the policy changes) **22,809** do not comply. This is approximately 6.4% of the total number, leaving 332,256 complying non-EU students.

Table 111: Estimate of number of students not complying with immigration proposals

	Privately funded HE/FE institutions (n = 1,191)	Publicly funded HE/ FE inst. (n = 2,397)	English Language schools (n = 2,060)	TOTAL
All students	31,388	1,704	3,480	36,572
Below degree students	18,205	1,125	3,480	22,809

Note: n = sample size in the survey

Source: London Economics Analysis, Overseas students in the immigration system: type of institution and levels of study, Home Office

We have assumed that the **10%** decrease in all students going to private and public HE/FE and English Language schools will take 2 years to have effect. If the immigration policy is implemented in 2010/11, this means the 10% decrease will be seen in 2012/13. As before, student numbers are a key driver of tuition fee income and other spending of overseas

students. Consequently, tuition fee income of FE and ELT non-EU students will decrease by 10% to 2012/13, as will other expenditure by this group⁹⁴. To model this, we assume there is a 10% decrease in the number of non-EU students going to ELT schools and FE colleges.

As before, student numbers are a key driver of tuition fee income and other spending of overseas students. Consequently, tuition fee income of FE and ELT⁹⁵ non-EU students will decrease by 10% to 2015, as will *other expenditure* by this group⁹⁶. Taking into account these reductions, *ceteris paribus*, we arrive at the following estimates for the aggregate value of education exports in the future (Table 112).

In 2014/15, there is a **£203 million** reduction in the estimate that incorporates the immigration policy change and the current best estimate. Furthermore, this increases to **£232 million** by 2019/20 and **£268 million** by 2024/25. The aggregate impact of the potential change in immigration policy on the value of education exports between 2011 (when the policy comes into force) and 2025 is estimated to be **£2,327 million** in present value terms.

Compared to the best estimate annual compound growth rate of 4.0%, the modelling of the immigration policy proposals corresponds to an annual compounded growth rate of **3.9%**.

Table 112: Comparison of best estimates and the effects of immigration policy

	2008/09	2009/10	2014/15	2019/20	2024/25
Best Estimates	14,143.0	14,709	17,915	21,819	26,575
Estimates taking into account immigration policy changes	14,143.0	14,709	17,712	21,587	26,307

Note: The best estimates in this table are based on the compound annual growth rate of the best estimates in Table 109 of 4.02%. Therefore the figures for 2009/10, 2014/15, 2019/20 and 2024/25 may not exactly match the figures for 2010, 2015, 2020 and 2025 above.

Source: London Economics' analysis

Alternative scenarios around the proposed immigration changes

Due to the fact that there is a high degree of uncertainty surrounding our estimates, we also provide analysis below of some variance in the central estimate. One scenario incorporates a degree of over compliance (and spillover effects). In doing so, we assume a 0.1% lower annual compound growth rate (**3.8%**) than the growth rate for the central estimate incorporating fully compliant immigration policy changes. The most favourable

⁹⁴ We make the assumption that the fall is equally distributed between HE and FE and is representative of the current distribution.

⁹⁵ our model, we make the assumption that all students that go to ELT colleges go through Tier 4. This is because we do not know how many students go through the student visitor route and so we cannot omit these students.

⁹⁶ We make the assumption that the fall is equally distributed between FE and ELT and is representative of the current distribution.

outcome (in terms of educational exports) is assumed to be the current best estimate generated using the methodology in section 3 of this report (which incorporates some non-compliance with current immigration policy).

Table 113: Sensitivity analysis around immigration proposals

	2008/09	2009/10	2014/15	2019/20	2024/25
Best Estimates (with 10% non compliance)	14,143.0	14,709	17,915	21,819	26,575
Immigration policy changes (full compliance)	14,143.0	14,709	17,712	21,587	26,307
Over-compliance and spillover scenario	14,143.0	14,709	17,627	21,380	25,930

Source: London Economics Analysis

Compared to the **central estimate**, the aggregate impact of the potential change in immigration policy under the pessimistic scenario on the value of education exports between 2011 (when the policy comes into force) and 2025 is estimated to be **£1,688 million** in present value terms.

The analysis so far has only looked at the direct effect of the immigration policy on removing all non-compliant non-EU students. In addition, there may be other students that could be indirectly affected. For example, because of the proposed restrictions to below degree level qualifications and the proposal to raise the level of language competence in order to qualify, the number of non-EU students undertaking pathway or foundation courses at ELT/FE institutions in the UK may be reduced, and thus reduce the number progressing to a UK higher education institution. It is not entirely clear how many students do go on to attend HEI's in the UK, however, English UK cited Universities UK, who estimated that 46% of the international students in UK higher education were already here on English language (pre-sessional and foundation year courses)⁹⁷. This would imply an extra fall in demand of 10,492 students for higher education courses.

Another proposal by UKBA is to close the Post Study Work route. This may decrease demand by non-EU students in both FE and HE because often the Post Study Work route is a major factor in students' decision to apply to the UK. With the exception of the 'over-compliance' scenario, we have not modelled the indirect effects associated these immigration policies but the reader should be aware that the forecasts may not reflect the full impact of these policies.

Increases in tuition fees

Another policy change agreed by the Coalition government is an increase of tuition fees for EU and UK domiciled students studying for an undergraduate degree in England. Legislation has been passed which allows higher education institutions to charge fees of

⁹⁷ Review of Student Visa Routes 2010, English UK

up to £6,000 per year from 2012/13, and up to £9,000 per annum providing fair access is promoted. As with the current system of fees and student support, fees are payable up front; however, tuition fee loans covering the entire tuition fee charged by higher education institutions are available to EU students. These changes to tuition fees and student support will reduce the demand from EU students wishing to study in English universities. This demand may dissipate to Scottish, Northern Irish and Welsh universities; however we do not take account of these spillover effects in the following model.

Context and estimates of the elasticity of demand

The impact of tuition fees on participation in higher education in the UK assessed by the Institute for Fiscal Studies as part of the Higher Education Fees and Funding Review (Dearden, Fitzsimons and Wyness (2010)). Using cross sectional information from the Labour Force Surveys between 1992 and 2008, the authors assess the impact of various HE student reforms that took place over the last 16 years including the introduction of upfront fees in 1998/99; deferred fees and loans in 2006/07; the reduction and abolition of student grants in 1999 and the re-introduction of student grants in 2004 (and extension in 2006). The authors found that an increase in tuition fees by £1,000 per annum – holding all other factors constant – would be expected to lead to a 4.4 percentage point decline in participation. The authors also find that a £1,000 per annum increase in grants increases participation by 2.1 percentage points, while a £1,000 per annum increase in loans appears to be worth more in terms of participation than an equivalent increase in grants (3.2 percentage points). The authors state that the “results indicate that a £1,000 increase in loans or grants is not sufficient to counteract the impact of a £1,000 increase in fees – the coefficient on fees being significantly higher than both loans and grants’. All results were statistically significant. Thus, increasing fees without increasing loans by the same value (or more) will result in a negative impact on participation. The authors also considered the impact of the 2006/07 student finance reforms compared to the 2003/04 system depending on the socioeconomic characteristics of students relative to the counterfactual. The results indicate overall impact of the reforms were neutral for all income groups.

Based on the IFS analysis, increasing tuition fee levels from £3,290 per annum to an assumed average fee of £7,500 per annum⁹⁸ supported by tuition fee loans might be expected to reduce participation by approximately 5 percentage points (from 45% of the cohort (SFR 2010) entering higher education to 40%). In other words, when considering the direct costs of university participation, following an increase in the tuition fee of 128% (supported by tuition fee loans), the analysis indicates that we might expect an 11.2% reduction in participation, which is equivalent to an elasticity of demand of **-0.087**. We have

⁹⁸ Although the maximum fee cap stands at £9,000, we have assumed that not all universities charge this rate. In particular, we have assumed that universities charge the same fee as Home students and that this fee covers the 80% reduction in Hefce teaching funding. The average fee charged by English higher education institutions is assumed to be £7,500 per annum for an undergraduate degree.

adopted a slightly more conservative approach and assumed in the initial analysis that the elasticity of demand is **-0.05**⁹⁹.

Assuming that the elasticity of demand is -0.05, this means that with an approximate price increase of 128%, demand will fall by approximately 6.4%. Therefore, for modelling purposes, we assume that the number of EU students coming to England for undergraduate study falls by 6.4% by 2012. Again, student numbers drive the value of tuition fee income and other spending by students and thus reduce both categories by 6.4%, but only for EU students at English universities.

Table 114 shows the effects of the increase in tuition fees on the total value of education exports. Specifically, assuming that higher tuition fees are implemented in the 2012/13 academic year, in 2014/15, we have estimated that there will be a **£339 million** difference (reduction) between the best estimate and the estimate that incorporates the policy change. The gap widens to **£672 million** by 2019/20 and **£844 million** by 2024/25. These estimates incorporate the fact that a large proportion of those EC students coming to the UK to study will be contributing significantly higher fees than is currently the case.

Table 114: Comparison of best estimates and the effects of the increase in tuition fees

	2008/09	2009/10	2014/15	2019/20	2024/25
Best Estimates	14,143.0	14,709	17,915	21,820	26,574
Estimates taking into account the increase in tuition fees ($\epsilon=-0.05$)	14,143.0	14,709	17,576	21,148	25,730

Note: the best estimates in this table are based on the compound annual growth rate of the best estimates in Table 109 of 4.02%. Therefore the figures for 2009/10, 2014/15, 2019/20 and 2024/25 may not exactly match the figures for 2010, 2015, 2020 and 2025 above.

Source: London Economics' analysis

The aggregate impact of the increase in the tuition fee charged by English higher education institutions on the value of education exports between 2012 and 2025 is estimated to be **£5.66 billion** in present value terms.

Pessimistic scenario

We provide some analysis below of some variance in the central estimate. The optimistic scenario is that the demand for higher education is entirely unresponsive to changes in tuition fees (elasticity of demand =0) and as such is reflected by the current best estimates presented in Table 114. The central estimate of the impact of changes in tuition fees

⁹⁹ There may be some uncertainty in relation to the elasticity of demand relates to the fact that there is currently excess demand for higher education in the UK. If this is proves to be significant for non UK students, then this will reduce the estimate of the elasticity of demand. However, there is also reason to believe that the responsiveness of quantity demanded to tuition fees is more elastic amongst international students given the fact that there are more substitutes available to these students than might be suggested in the IFS analysis concentrating on UK students.

charged assumed that the elasticity of demand equals -0.05. We assume that in the pessimistic scenario, the demand for higher education is marginally more responsive than previously thought, with the elasticity of demand standing at -0.087 (calculations in previous section based on IFS research).

Under the pessimistic scenario, where demand for higher education is more responsive than originally modelled, the value of education exports is further reduced by **£100 million** in 2019/20 and **£126 million** in 2024/25. In aggregate, the alternative assumption about the elasticity of demand reduces the present value of educational exports between 2012 and 2025 by an additional **£860 million**.

Table 115: Sensitivity analysis around tuition fee policy

	2008/09	2009/10	2014/15	2019/20	2024/25
Best Estimates ($\epsilon=0$)	14,143.0	14,709	17,915	21,820	26,574
Central estimate taking into account tuition fees increase ($\epsilon=-0.05$)	14,143.0	14,709	17,576	21,148	25,730
Pessimistic scenario ($\epsilon=-0.087$)	14,143.0	14,709	17,522	21,048	25,604

Source: London Economics Analysis

Combining scenarios

Finally in this section, we provide some information on the potential impact of the combined immigration policy change and a tuition fee rise (Table 116). Over time, compared with the current **best estimate** forecast where no policy amendments have been considered, using the **central estimate**, the impact of the combined immigration and tuition fee policies stands at **£542 million** in 2014/15, **£904 million** in 2019/20 and **£1,112 million** in 2024/25. The aggregate impact of the immigration changes and tuition fee increases on the value of education exports between 2011 and 2025 is estimated to be **£7,977 million** in present value terms compared to the **best estimate**.

Table 116: Comparison of best estimates and the combination of policy changes

	2008/09	2010	2015	2020	2025
Best Estimate	14,143.0	14,709	17,915	21,820	26,574
Estimates taking into account central estimates immigration and tuition fee policy	14,143.0	14,709	17,373	20,916	25,462
Estimates taking into account both pessimistic estimates immigration and tuition fee policy	14,143.0	14,709	17,234	20,609	24,959

Note: the best estimates in this table are based on the compound annual growth rate of the best estimates in Table 109 of 4.02%. Therefore the figures for 2009/10, 2014/15, 2019/20 and 2024/25 may not exactly match the figures for 2010, 2015, 2020 and 2025 above.

Source: London Economics' analysis

Under the more pessimistic scenario, where the demand for higher education is more responsive to changes in price and the proposed changes to immigration policy result in some degree of over-compliance or spillover effects, the impact of the combined immigration and tuition fee policies (compared to **central estimates** of these policy effects) stands at **£139 million** in 2014/15, £307 million in 2019/20 and **£503 million** in 2024/25. Under the pessimistic scenario, the aggregate impact of the potential change in immigration policy and tuition fee increases on the value of education exports between 2011 and 2025 is estimated to be **£3,186 million** in present value terms compared to the **central estimate**.

Compared to the best estimate annual compound growth rate of 4.0%, the central estimate of the immigration policy proposals and tuition fee increases corresponds to an annual compounded growth rate of **3.7%**, while the pessimistic estimate corresponds to an annual compounded growth rate of **3.6%**.

References

Association of Colleges (2009), *Overseas student recruitment in Colleges*

Baldauf, B., Hogarth, T. and De Hoyos, M. (2008) *Going Global? UK FE/TVET – opportunities in the international market*, Association of Colleges (2008)

Banks, M., Olsen, A. and Pearce, D (2007), *Global Student Mobility: An Australian Perspective Five Years On*, IDP Australia

BBC (2009), *BBC Full Financial and Governance Statements 2008/09*

Bohm, A., Follari, M., Hewett, A., Jones, S., Kemp, N., Meares, D., Pearce, D. and Van Cauter, K. (2004), *Vision 2020*, The British Council, Universities UK and IDP Australia

British Council (2007), *Malaysia, International Student Demand for Trans National Education (TNE) in Malaysia: Opportunities and Challenges for UK Education 2007*, British Council and Education UK.

Bullivant, S. (1998). *The value of education and training exports to the UK economy*, Department for Education and Employment Research Report RR83.

Commonwealth Scholarship Commission (2008), *49th Annual Report* Crossick, G. (2010), *The future is more than just tomorrow: Higher education, the economy and the longer term*, Universities UK, *Recession to Recovery* (2010)

Department for Education and Skills (DfES), *Student Income and Expenditure Survey 2004/05*.

Department for Innovation, Universities and Skills (DIUS), *Student Income and Expenditure Survey 2007/08, English-domiciled students*. Hudzik (2010), *The Economy, Higher Education and Campus Internationalisation*, International Educator May and June 2010

Humfrey, C. (2009), *Transnational Education and the Student Experience: a PMI Student Experience project report*, UK Council for International Student Affairs

International Monetary Fund (1993) *Balance of Payments Manual*, Fifth Edition (BPM5), Washington, D.C.

Johnes, G. (2004). *The global value of education and training exports to the UK economy*, April, British Council and UK Trade and Investment.

Kelly, U., McLellan, D. and McNicoll, I. (2009). *The impact of universities on the UK economy*, Universities UK

Language Travel Magazine (2010), *Special report: The Global market*, November 2010, issue 193

Lenton, P. (2007). Global Value, *The value of UK education and training exports: an update*, British Council, September. Available from:
http://www.britishcouncil.org/global_value_-_the_value_of_uk_education_and_training_exports_-_an_update.pdf.

Letter to the committee specialist from the Head, Parliamentary Relations Team, Foreign and Commonwealth office. Available from:
<http://www.publications.parliament.uk/pa/cm200809/cmselect/cmfaaff/195/195we97.htm>

McBurnie, G. and C. Ziguras (2007), *Transnational Education: Issues and Trends in Offshore Education*, Routledge Falmer, London
OECD (2010), *Education at a Glance OECD Indicators 2010, Annex 3: Sources, Methods and Technical Notes, Chapter C: Access to Education, Participation and Progression*

Ofqual (2010), *Annual Qualifications Market Report*

Open University (2009), *The Open University Annual Report 2008/09*

PricewaterhouseCoopers LLP (2005), *The Market for Qualifications in the UK*

Rylance-Watson, E. and Associates (1999). *UK Exports of Training Expertise*, Report to the Department for Education and Employment.

Tang and Nollent (2007), *UK-China-Hong Kong Transnational Education Project*, Report to the British Council, January 2007
The British Council and the Economist Intelligence Unit (2010), *Forecasting International Student Mobility*

The Independent Schools Council (2004), *Annual Census 2004*

The Independent Schools Council (2005), *Annual Census 2005*

The Independent Schools Council (2006), *Annual Census 2006*

The Independent Schools Council (2007), *Annual Census 2007*

The Independent Schools Council (2008), *Annual Census 2008*

The Independent Schools Council (2009), *Annual Census 2009*

The Independent Schools Council (2010), *Annual Census 2010*

The Knowledge Partnership for the UK Higher Education Funding Bodies, *Review of the Overseas Research Students Awards Scheme (ORSAS)*

The Publishers Association (2009) *Statistics Yearbook 2009*

UK Withdrawal of Support for Commonwealth Scholarships to Students from More Developed Commonwealth Countries, A Council for Education in the Commonwealth Briefing Note, Council for Education in the Commonwealth. Available from: <http://www.cecomm.org.uk/attachments/CEC%20Briefing%20Note%20on%20FCO%20funding%20decision%20re%20CSFP%20.pdf>

Unite (2006) *The International Student Experience Report 2006*

Universities UK (2003), *Survey of Tuition Fees for International Students*
Universities UK (2006), *Higher education in facts and figures, summer 2006*

Universities UK (2007), *Higher education in facts and figures, summer 2007*

Universities UK (2008), *Higher education in facts and figures, summer 2008*

Universities UK (2008), *The future size and shape of the higher education sector in the UK: threats and opportunities*

Universities UK (2008), *The future size and shape of the higher education sector in the UK: demographic projections*

Universities UK (2009), *Higher education in facts and figures, summer 2009*

Universities UK (2010), *Higher education in facts and figures, summer 2010*

Vickers, P. and Bekhradnia, B (2007), *The Economic Costs and Benefits of International Students*, Higher Education Policy Institute

Vincent-Lancrin, S (2008), *Cross-border Higher Education: Trends and Perspectives*, OECD Higher Education to 2030, Volume 2, Globalisation, Chapter 2.

Vincent-Lancrin, S (2008), *What is the Impact of Demography on Higher Education Systems? A Forward-Looking Approach for OECD Countries*, OECD Higher Education to 2030, Volume 1: Demography, Chapter 2. ISBN 978-92-64-04065-6

Vincent-Lancrin, S. (2009), *What is changing in academic research? Trends and prospects*, OECD Higher Education to 2030, Volume 2, Globalisation, Chapter 5

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