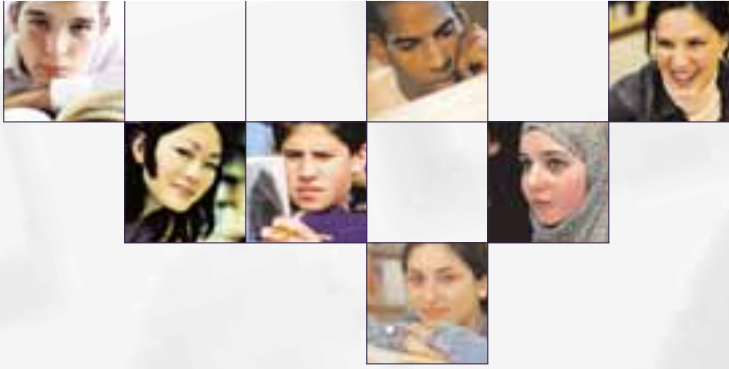


Vision 2020

Forecasting international student mobility

a UK perspective

Anthony Böhm
Marcelo Follari
Andrew Hewett
Sarah Jones
Neil Kemp
Denis Meares
David Pearce
Kevin Van Cauter

BRITISH COUNCIL

Universities UK

idp

EDUCATION UK
the best you can be

Vision 2020

Forecasting international student mobility

a UK perspective

Anthony Böhm
Marcelo Follari
Andrew Hewett
Sarah Jones
Neil Kemp
Denis Meares
David Pearce
Kevin Van Cauter

Project team

Anthony Böhm
Anthony is head of IDP Education Australia's Planning and Research Branch. In this role he is responsible for IDP's corporate and industry research as well as the company's portfolio of strategy and marketing consultancy services. He has also been engaged as an analyst and strategist for the Australian government, education institutions and the private sector.

Marcelo Follari
Marcelo is Project Manager, Industry and Corporate Research within the Planning and Research Branch of IDP. Marcelo was the principal researcher of the UK Forecasting Project.

Andrew Hewett
Andrew formerly worked as a project manager in IDP's Planning and Research Branch for several years. He has extensive experience particularly in researching and analysing the international student markets globally, international student mobility data, and he was a key member of the forecasting projects for both Australia and the United Kingdom.

Sarah Jones
Sarah Jones was responsible within the British Council for statistical analysis and scenario development in relation to international student recruitment, including support to the Prime Minister's Initiative. Sarah is now employed as an education and economics consultant in DTZ Pieda Consulting.

Neil Kemp
As director of the Education UK Marketing Division, Neil has responsibility for leading the international effort to market UK education and training for the British Council. He is a member of the Education and Training Exports Group, a UK government advisory body. Neil has worked extensively overseas on education projects, including for over 20 years in Asia. He led the UK team for the Vision 2020 project

Denis Meares
As a senior manager with IDP's Planning and Research Branch, Denis has extensive experience in international education. He has worked as a key member of research and consultancy teams for clients across all education sectors and has taught in the secondary and higher education sectors in Australia, Africa and the Asian Region.

David Pearce
David is Principal Policy Analyst with the Centre for International Economics, based in Canberra. David has vast experience in the construction and use of formal mathematical models, particularly general equilibrium models, as a tool for effective policy analysis

Kevin Van Cauter
Kevin Van Cauter is a Distance Learning Adviser within the Education and Training Group at the British Council. Kevin has extensive experience of international student data analysis, specialising in the demand for transnational education (TNE), and has produced the analysis of demand for UK TNE programmes for this report.

The project team would like to acknowledge the support in Australia from: Maggie Anderson, Simon Bush and Skye Worthy of IDP's Planning and Research Branch; and in the UK from Nick Butler, Jane Finnegan and Christine Bruce from the British Council, and Liz Green, an independent consultant.

UK Technical Advisory Group

The project team benefitted from the advice of a Technical Advisory Group at various stages in the project in the UK, the membership of which was as follows:

Tim Westlake	Cardiff University
Jean Krasocki	Northern Universities International
Angela Little	Institute of Education, University of London
Bahram Bekhradnia	Higher Education Policy Institute, Oxford
Norbert Pachler	Institute of Education, University of London
Roy Leitch	Scottish Interactive University
Geraint Johnes	Lancaster University
Christine Humfrey	Nottingham University
Colin Gilligan	Sheffield Hallam University
Peter Mackenzie-Smith	UKTI
Catherine Marston	Universities UK
Sharne Procter	University of Glasgow
Graham Wood	University of Huddersfield
Tony Westaway	University of Loughborough
Shawana Williams	DfES
Piera Gerrard	British Council
Keith Williams	British Council
Barrie Morgan	British Council
Christine Bateman	British Council
Suzanne Alexander	British Council
Neil Kemp (Chair)	British Council

The British Council

The British Council, which celebrates its 70th anniversary this year, connects people worldwide with learning opportunities and creative ideas from the UK to build lasting relationships between the UK and other countries. It is the UK's international organisation for educational opportunities and cultural relations and is represented in 110 countries. The British Council is funded by a mixture of a grant from the UK government and revenue generated through paid services.

The British Council's strategic objectives focus on the themes of learning, creativity and society. The aims are:

- to increase international recognition of the range and quality of learning opportunities from the UK
- to promote the learning of English
- to strengthen educational co-operation between the UK and other countries
- to build appreciation of the UK's creativity and scientific innovation among people overseas, and strengthen their engagement with the diversity of UK culture
- to enhance awareness of the UK's democratic values and processes, and to work in partnership with other countries to strengthen good governance and human rights.

Further information can be found at www.britishcouncil.org

Universities UK

Universities UK is the essential voice of all the UK universities. It promotes and supports their work and provides services to all their members, the executive heads. It works to deliver its mission by:

- speaking out for a thriving and diverse higher education sector that creates benefits for all
- providing and disseminating essential information
- bringing people together to share knowledge and good practice.

There are currently 122 members of Universities UK including all universities in the UK and some university colleges. Further information on Universities UK can be found at www.universitiesuk.ac.uk

IDP Education Australia

For more than 30 years, IDP Education Australia (IDP) has played a major role in international education and development. IDP operates in an ever-changing environment and the organisation's success has been built on its ability to adapt to change.

IDP is a world leader in international education and development services. It is a global organisation with more than 90 locations around the world and activities in some 50 countries. Owned by 38 of 39 Australia's universities and representing all education sectors, IDP is an independent not-for-profit organisation.

IDP also provides customised consulting services; conducts industry and sector-wide research; analyses market developments; contributes to research in international education; organises the annual Australian International Education Conference, training programs and other major conferences and events; and plays a key consulting role in establishing links between Australian education institutions and their overseas counterparts.

Further information can be found at www.idp.com

Foreword

International students are extremely important for UK higher education. Their presence in UK universities and colleges has many positive impacts, including:

- to promote the quality and range of programmes available
- to increase the research output
- to enhance revenue generation
- to internationalise the student and staff body
- to improve efficiency and international competitiveness.

The latest data (2002–03) indicates that there are over 270,000 international students (i.e. EU and non-EU) in UK higher education. These generate about £1.5 billion per annum in fee revenue and, together with their spending while studying in the UK, result in about £3 billion gross addition to the UK economy. There are also nearly 200,000 international students following UK higher education programmes delivered in their own countries. For similar reasons to those outlined above, the UK welcomes their engagement.

There are significant numbers of international students in further education colleges, private colleges, schools and English language training institutions (over 500,000 in the last). Many of these are on pathway courses leading into some form of higher education. Although this report does not cover demand for these sectors explicitly the forecasts do have direct relevance.

The UK education and training system has therefore come to depend on and welcome a strong flow of international students. Given the growth of global competition, it has become essential for policy makers and staff of institutions to be better informed regarding likely patterns of demand, particularly as this will facilitate the formulation of investment decisions and internationalisation strategies at all levels in the system.

Similarly, central and local governments are to varying degrees affected by the presence of international students in the UK and within their constituencies, and they will also need to be prepared for increased future demand.

This study is intended to be an essential tool for use by policy makers, professionals and practitioners in all countries.

Contents

Executive summary

'Wherever I travel I meet international leaders who have studied in Britain. Dynamic, intelligent people who chose Britain because we offer high-quality education and training. This is good news for the UK. People who are educated here have a lasting tie to our country. They promote Britain in the world, helping our trade and democracy.'

Tony Blair, 1999

I Introduction

International education is an economic sector that is extremely attractive to the UK: it is knowledge-intensive, high value-added and offers long-term benefits. This report demonstrates that global demand for international education is set to increase dramatically over the next few years. This however needs to be set in the context of a sector that is rapidly evolving on a global basis.

Technological innovations are changing the nature of learning. Today's international students are more technologically literate, have greater expectations and are more selective than their predecessors.

Not only is international competition increasing rapidly, but its nature is also changing significantly. The global opportunities available will attract many new players, public and private, international and national, with innovative and varied alliances and partnerships and new approaches to delivery.

The UK has been a global leader, second only to the USA, in the provision of higher education to citizens of other countries. In 2002–03, the UK had over 270,000 international students enrolled in higher education, which was about 25 per cent of the total number studying in the main English-speaking destination countries.

Given this context it is extremely important that institutions, policy planners, strategists and international mangers better understand likely future directions. This report assists by:

- forecasting possible future demand for international student places from 144 countries
- assessing the likely market share of the UK in these countries.

Associated with the analysis, the report also considers:

- internationalisation policies and strategies for the UK and institutions to respond to the growth in demand
- how the UK can be positioned to respond to increasing global competition and the changing needs and expectations of students.

The research focuses on the demand for higher education in the UK, and some additional projections for UK higher education delivered transnationally are given.

The report does not explicitly cover further education, schools or the demand for English language programmes. However, the findings are very relevant to these sectors as many students enrol on such programmes as a pathway to higher education.

II Research design

A team of British Council and IDP Education Australia staff undertook the project. Additional advice was sought from a Technical Advisory Group (TAG), comprising academics and practitioners active in the field.

The project employed a model that allowed the forecasting of global demand for international student places from 144 countries through considering the following information over the forecast period 2003–2020:

- income per capita in each country and its projected rate of change
- demographic projections over the forecast period
- participation rates in both higher education and international higher education in each country and its projected rate of change.

The model provided forecasts of demand for international student places for individual destination countries. The UK's future market share will depend upon the changes in its attractiveness relative to the other Main English-Speaking Destination Countries (MESDCs)[1].

Measuring the relative attractiveness of the UK as an international education destination using a 'discrete-choice model' allows its forecast market share to be calculated.

Through market research analysis the following key attributes (attractiveness factors) affecting student choice of destination country were identified:

- quality of education
- employment prospects
- affordability
- personal security
- lifestyle
- education accessibility.

The discrete choice model analysed the historical performance of each of the MESDCs with regard to the attractiveness factors as well as historical market shares. This analysis revealed very clearly that two factors are of over-riding importance for the UK, relative to other MESDCs:

- the quality of education provision
- future employment prospects associated with the qualification obtained.

Through the analysis, the likely changes in market share associated with decline or enhancement of an attractiveness factor can be estimated. For example, a 1 per cent improvement in the perceived quality of UK education across South East Asia, relative to other MESDCs, will lead to a 4.3 percent increase in the UK's share of demand from South East Asia. This could result in a gain of about 6,000 students from that region for UK higher education over the period from 2005 to 2010.

[1] *MESDCs: USA, Australia, Canada, New Zealand, Canada*

III Overall forecasts

Global demand for international higher education

The model forecasts that the total global demand for international student places will increase from about 2.1 million in 2003 to approximately 5.8 million by 2020, with demand for places in the five MESDCs forecast to increase from about 1 million places to about 2.6 million places. Asia is predicted to dominate demand for the MESDCs, representing 1.8 million places or 76 per cent of the global demand for the five major English-speaking destination countries by 2020. Table I summaries the regional analysis; a more detailed breakdown by region can be found in Table 3.5.1 in section 3.5.

Table I

The global demand for international student places in HE in MESDCs by main student source region (000s)

	2003	2005	2010	2015	2020	Growth*
Africa	63	67	87	113	146	5.2%
Middle East	37	39	49	60	73	4.2%
Asia	528	612	943	1,347	1,862	7.8%
America	127	134	156	181	209	3.0%
Europe	226	235	262	289	313	2.0%
World	988	1,096	1,507	2,000	2,614	6.0%

** Compound annual growth*

IV UK scenarios and forecasts

Introduction

A set of five scenarios was created to forecast the likely impact of changes in the global market. Each scenario incorporated different predictions regarding the relative performance of the UK compared to the other destination countries and the likely magnitude of impact upon the UK's market share. The scenarios and the key features of their results are summarised below. For a more detailed explanation and breakdown, see chapters 2 and 3.

Base scenario

This assumed that the UK's relative performance with regard to each of the attractiveness factors remained fixed over the forecast period. Changes in demand would result from compositional factors, i.e. demographic and economic changes and shifts in educational participation.

The forecast indicates that there will be demand for approximately 325,000 places in the UK by 2010 and 511,000 places by 2020. This is summarised at a regional level in Table II. In an increasingly competitive market, the UK global share would probably decline from 24.1 per cent in 2003 to 19.5 per cent in 2020.

Table II

Forecast of the global demand for international student places in the UK according to region
Base scenario (000s)

	2003	2005	2010	2015	2020	Growth*
Africa	19	20	26	34	44	5.3%
Middle East	10	10	13	16	20	4.4%
Asia	74	85	130	188	266	7.9%
East Asia	43	50	75	112	164	8.3%
SE Asia	19	20	27	37	48	5.9%
South Asia	12	15	27	38	53	9.1%
America	23	23	26	30	33	2.3%
Europe	111	115	127	137	146	1.6%
West	99	103	112	119	125	1.4%
East	12	13	15	18	20	3.3%
Oceania	2	2	2	2	3	2.0%
Totals World	238	256	325	407	511	4.7%

** Compound annual growth*

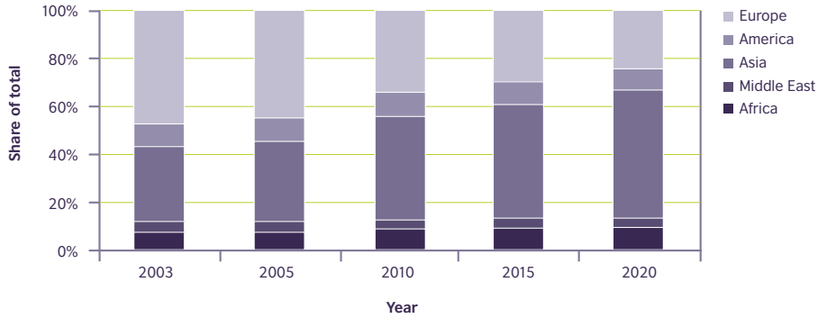
Optimistic scenario

This scenario assumes that the UK will consistently improve its performance in all the key attractiveness attributes over the forecast period.

The total international student demand for UK higher education is forecast to increase to 400,000 by 2010 and 870,000 by 2020. This is an average annual growth of 8 per cent, compared to 4.7 per cent for the base scenario. The regional composition of this demand is illustrated in Figure 1.

Figure 1

The global demand for international student places in UK HE according to region
Optimistic scenario



Pessimistic scenario

This scenario assumes that the UK will experience a decline in all its attractiveness attributes, but particularly in quality, and that these occur simultaneously. Under these conditions, global demand for UK higher education is forecast to decrease by over 30 per cent to 158,000 by 2010 and then increase slowly to 254,000 places in 2020. The UK would lose significant market share to its major competitors, declining from 24 per cent of all students in the MESDCs in 2003 to 10 per cent by 2020.

Price escalation scenario

This assumes a large decline in the perceived performance of the UK in terms of affordability, e.g. from a lack of places in UK institutions, large price increases, UK policy changes, and so on.

The results could seem to be surprising as the UK's market share is forecast to rise initially, although it would eventually drop back to previous levels. This is because price is frequently viewed as a proxy for quality, and – given the overriding importance of quality and employability for the UK – market share would probably increase initially in response to a price increase.

European Union impact scenario

This examines the impact of the changing pattern of demand from Europe, including new countries becoming EU member states. The UK has traditionally received about 40 per cent of its international students from Europe. Numbers from Europe are forecast to grow in this scenario from 110,000 to over 170,000 by 2020, with a rapid increase of students from the ten new EU states joining in 2004. This will increase further when Bulgaria and Romania join in 2008.

Comparing scenarios

It is perhaps most useful to compare the base and optimistic scenarios for the UK. However, it must be remembered that the base scenario is not the level that the UK might attain through natural growth in the market. Two factors go against this:

- The marketplace for international students can change; nothing can be taken for granted. Each year, a completely new group of international students must be attracted to replace those completing their programmes. This requires continuing marketing effort and investment.
- The marketplace for international education providers can change rapidly. There are new competitors entering the market and existing ones will seek to operate in different ways.

In this context, Table III provides an indication of the potential growth in demand that the UK could experience if effective strategies are adopted to respond to these market changes.

Table III

Summary of forecast demand for international student places in the UK under base and optimistic scenarios (000s)

	2003	2005	2010	2015	2020	Growth*
All MESDCs	988	1,096	1,507	2,000	2,614	6.0%
UK – base scenario	238	256	325	407	511	4.7%
UK – optimistic scenario	240	271	407	603	869	8.1%

** Compound annual growth*

Student numbers in the UK have been growing at the slowest average annual rate compared with other MESDCs averaged over the last five years. The net effect has been a loss of market share over the period. However, estimates indicate that in 2002–03 the UK managed to increase market share significantly (possibly to 25.5 per cent, up from 23.5 per cent in 2002). This coincided with stronger and much more strategic marketing activity by the British Council overseas, increased efforts on the part of individual institutions, and co-ordination by government partners as part of the Prime Minister's Initiative. As Table IV below indicates, only through strategies to secure optimistic scenario conditions might the UK be able to sustain market share growth.

Table IV

Forecasts of UK market share of MESDCs: various scenarios

	2003	2005	2010	2015	2020
GLOBAL					
Base scenario	24%	23%	22%	20%	20%
Optimistic scenario	24%	25%	27%	30%	33%
Pessimistic scenario	24%	18%	13%	9%	10%
EUROPEAN					
Base scenario	49%	49%	48%	47%	47%
Optimistic scenario	49%	51%	50%	60%	63%
Pessimistic scenario	49%	43%	35%	28%	29%
NON-EUROPEAN					
Base scenario	17%	16%	16%	16%	16%
Optimistic scenario	17%	18%	22%	25%	29%
Pessimistic scenario	17%	12%	8%	6%	7%

Demand for different levels of study

The proportion of students at each level of study for each major region was forecast to 2020. Of note is the fact that postgraduate taught programmes become the courses most in demand. This is summarised in Table V.

Table V

Forecasts of global demand for international student places in the UK (000s) – by level of study (base scenario)

	2003	2005	2010	2015	2020	Growth*
Postgraduate research	35	37	46	54	70	4.0%
Postgraduate taught	77	90	131	174	221	6.3%
Total postgraduate	**112**	**127**	**177**	**228**	**291**	**5.7%**
First degree	93	97	117	143	177	4.0%
Other undergraduate	32	32	31	37	42	1.9%
Total undergraduate	**126**	**129**	**148**	**180**	**219**	**3.5%**

** Compound annual growth*

Subject areas in demand

An analysis of the forecast demand by broad subject area revealed the following:

- Business and related studies continue to be the leading subject area in demand. The proportion of all international students enrolled in these is projected to rise from 21 per cent in 2003 to 26 per cent in 2020.
- Computer science experiences the highest growth rate of any subject area at 8.5 per cent per annum. It becomes the third most popular area.
- The arts and humanities area falls from 18 per cent in 2003 to 14 per cent in 2020 as a proportion of all international students in the UK. However, even in 2020 it still remains the subject area with the second highest level of demand.

Transnational education[2]

The global demand for UK transnational education (TNE) in 2020 is predicted to outstrip that for UK onshore international education. It is forecast to grow from an estimated 190,000 in 2003 to 350,000 in 2010 and 800,000 in 2020, a compound annual growth rate of just over 9 per cent. A detailed breakdown of this forecast demand is provided in section 3.10.

In 2003, five Asian countries – China, India, Malaysia, Hong Kong and Singapore – made up 58 per cent of the global demand (110,000 students) for UK programmes. These countries are predicted to represent about 66 per cent of global demand in 2010 (just over 225,000 students). Demand from China and India is forecast to grow by over 15 per cent per annum and Russia and other East European states are also expected to be among the leading countries in 2020.

International students and UK students on campus

Given the forecasted strong growth in demand from international students, it is necessary to consider the likely impact on total student population in UK higher education. This is described in Table VI.

The implications of these proportions and issues concerning the need for greater diversity are discussed in chapter 4.

Table VI

International students as a percentage of all students in UK HE (current and projected)

	2003	2010	2020
All students (undergraduate and postgraduate)*	10.2	10.5	11.6
All full-time students	15.8	17.6	21
All full-time postgraduate students	38	38	37
All full-time undergraduate students	10.5	9	13

** Includes part-time plus full-time*

Impact of increased higher education provision in the main source countries

One factor that will considerably influence demand for international study is the availability of university places in the student's home country. The model takes this into account. However, if a country is able to accelerate local provision beyond that predicted normally, then the demand for international study places from that country may fall. The two countries where this would have the largest impact overall are China and India. Several scenarios where both these countries were assumed to increase domestic higher education places were modelled. One of these assumed a 50 per cent reduction in the demand for international education from these two countries, due to increased domestic provision. The net impact implied by this increase in provision in China and India would be a total decrease in global demand in 2020 across all MESDCs of some 576,000 higher education places (22 per cent reduction). In the UK, a decrease in global demand from 511,000 to 445,000 (13 per cent) in 2020 might be experienced.

Sources of funds for international students

Much of the strong growth in numbers of international students over the last few years has been due to private demand from individuals. An analysis of funding sources for international students in the UK indicates the following:

- **Undergraduate and related studies**: Nearly two-thirds of the approximately 143,000 students are privately funded.
- **Postgraduate taught courses**: Of the approximately 88,000 international students on these programmes, some 86 per cent have their fees met from sources outside the UK – the majority appearing to derive from private rather than official funds.
- **Postgraduate research**: Approximately 40 per cent of the 39,000 international students on postgraduate research programmes receive some payment of fees from sources within the UK (scholarships, fee waivers, etc).

[2] *TNE comprises all forms of programmes delivered overseas by UK HE institutions.*

Gender-related considerations

Approximately 48 per cent of all international higher education students in the UK are women. However, there are considerable variations by source country, level and subject. The female participation rate in postgraduate taught programmes for a number of East Asian countries (Taiwan, Thailand, Japan and China) is high. In contrast, 75 per cent of all students from India are men.

V Summary of main implications

The study forecasts that UK higher education may experience a tripling of the current level of demand for international students to 850,000 by 2020. Similarly, for programmes delivered through a variety of arrangements transnationally, growth is forecast to increase rapidly – from the current figure of approximately 190,000 students to over 800,000 by 2020.

However, the sector is evolving rapidly, and the future operating environment will be very different from the current one. The global opportunities available will attract many new players, public and private, international and national, with innovative and varied alliances and partnerships and new approaches to delivery employing a range of technological solutions. Student needs and expectations are becoming increasingly sophisticated and demanding. The UK has been a global leader, second only to the USA, in the provision of higher education to citizens of other countries – what might be necessary to sustain or even improve this position?

This research defines five fundamental strategic issues about the future extent and nature of international education activities. These can be summarised as:

- **Ensuring quality**: Can the UK maintain its quality position while significantly expanding provision?
- **Responding to global competition**: How might the UK respond to the dramatic changes in the global market that may come from the new competitive environment?
- **Building capacity**: Do institutions have sufficient capacity (human and physical) to respond to the very large opportunities presented?
- **Presenting diversity**: How will the composition of demand change? Can the UK meet the challenge of diversity and student choice?
- **Delivering globally**: How might the UK capitalise on its current leading global position for transnational provision?

These issues are discussed in depth in chapter 4 and implications for future policy raised. These implications include that:

- the UK international education industry needs a coherent national approach led by a clear strategic vision
- any strategy must engage directly with UK higher education institutions to reflect their needs and constraints and facilitate their collaboration
- new investment is essential, to:
  - refresh, develop and reposition the 'Education UK' brand to underpin a marketing strategy and to combat increasing competition
  - develop and grow the UK's position in transnational education
  - develop and build long-term sustainable relationships with those who have experienced a UK education
- assuring quality is vital. This needs to encompass all education providers (not just the higher education sector) which are active in delivering in or from the UK.

If the UK is able to respond in the ways indicated throughout the report, the ultimate beneficiaries will be students – both international and UK, and whether studying in the UK or on programmes delivered locally.

1 Project overview and context

'The UK has been successful in growing international education activities. However, the dynamic nature of this sector requires the UK to be ever-more responsive to the changing global environment.'

Vision 2020, section 1.3

1.1 Introduction

The UK and international education

The UK has always welcomed large numbers of international students. Over recent years, their importance has been recognised by both institutions and government. Their presence in UK universities has many positive impacts, including promoting:

- the quality and range of programmes now available at both undergraduate and postgraduate levels
- the development of internationally focused programmes, including country and regional specialist studies; languages and literature; international comparative education; comparative studies in law, economics, politics etc.
- the research output: the range and scope of UK's research output has been greatly enhanced through attracting high-quality international research students
- enhanced international content of courses on offer: courses increasingly offer programmes that are enriched with international content
- internationalisation of the student and staff body
- improved efficiency and international competitiveness: organisations that trade internationally are generally more effective and innovative than those active only domestically
- a very significant source of revenue for HE institutions in the UK and the wider economy.

In addition, the presence of international students in UK universities has ensured that a wider range of programmes is available to UK domestic students in higher education institutions generally.

The latest data from the Higher Education Statistics Agency (HESA) for 2002–03 indicate that there are over 270,000 international students (EU and non-EU) in UK higher education. These generate over £1.5 billion per annum in fee revenue, and – together with their spending while studying in the UK – result in over £3 billion gross addition to the UK economy.

In addition, there are an estimated 190,000 international students following UK higher education programmes delivered in their own countries. An estimated total of some 3 million UK examinations are taken overseas; these include English language, music, professional and technical studies.

There are significant numbers of international students in further education colleges (over 60,000 in 2002–03), private colleges, schools and English language training institutions (over 500,000 in the last). Many of these are on pathway courses leading into some form of higher education.

The UK welcomes international academics on short visits and research attachments. There is also foreign contracted research and development in UK universities. The total value of all these activities in 2001–02 was estimated to be about £600 million.[3]

The UK also generates considerable other exports revenue from goods and services associated with education and training, including:

- education-related publishing (over £900m p.a.)
- education equipment (over £500m p.a.)
- consultancy services (worth some £13 billion p.a. to the UK economy); however, it is impossible to separate the education and training shares.

In this context, and given the particular importance of international students to the UK, it is essential for policy makers and staff of institutions to be better informed regarding likely patterns of future demand. This will facilitate the formulation of investment decisions and internationalisation strategies at all levels within institutions, up to the highest.

Similarly, central and local governments are to varying degrees affected by the presence of international students in the UK and within their constituencies, and will also need to be prepared for what patterns future demand may bring.

[3] *'Global values of UK Education and Training Exports': Professor Geraint Jones sponsored by UKTI and the British Council (April 2004).*

1.2 International students in the UK

After a period of relative decline in terms of global market share for the UK during the 1990s, action was taken. This involved a more integrated approach by government, education institutions and the British Council (under the aegis of the Prime Minister's Initiative – PMI), and has led to a significant increase in numbers of international students in the UK in 2002–03.

The main source countries for UK international students have remained relatively stable over the last five years although the order has somewhat changed. This is shown in Table 1.2.1 below.

Table 1.2.1

Top 25 main source countries for international students in UK higher education, 1998 and 2003 compared

2003		1998	
China	32,000	Greece	27,950
Greece	24,200	Irish Republic	14,950
USA	14,350	Germany	13,050
Germany	13,750	France	12,750
France	13,000	Malaysia	12,000
Irish Republic	12,700	United States	10,450
India	10,900	Hong Kong*	7,500
Malaysia	10,200	Spain	7,050
Hong Kong*	9,700	Singapore	5,600
Spain	7,600	Japan	5,550
Gulf States**	6,450	Italy	5,500
Japan	6,150	Gulf**	4,550
Italy	6,050	Norway	4,050
Taiwan	4,900	China	3,850
Singapore	4,150	Sweden	3,550
Nigeria	4,100	Taiwan	3,450
Sweden	3,750	Cyprus	3,300
Cyprus	3,750	India	3,300
Canada	3,650	Canada	2,950
Norway	3,600	Netherlands	2,700
Thailand	2,950	Finland	2,600
Zimbabwe	2,900	Thailand	2,350
South Korea	2,850	Belgium	2,250
Kenya	2,800	Kenya	2,200
Pakistan	2,800	Portugal	2,150

**Hong Kong is presented separately for comparison purposes*
***Saudi Arabia is included within the Gulf in this context*

Tables for the USA and Australia are included in Appendix C for comparative purposes.

1.3 Current concerns for international education in the UK

The UK has been successful in growing international education activities. However, the dynamic nature of this sector requires the UK to be ever-more responsive to the changing global environment. The areas listed as concerns in this section reflect some of the factors identified to date. There are others and these are addressed in chapter 4.

International students: There is a need to appreciate better and respond to the needs and changing aspirations and expectations of international students. However, to take this forward, it is essential to understand the variables involved which depend on a range of factors including country of origin and level and subject of study.

Internationalisation of UK institutions: What will be the appearance of an 'international' higher education institution in 2020? Much emphasis is currently placed on international student recruitment by institutions; however, many institutions are engaged in a great diversity of international activities. The question of how these might be drawn together in a more coherent approach to achieve greater impact towards their strategic mission needs to be addressed.

Transnational education: There are great opportunities for the UK in the rapidly expanding market for overseas-delivered programmes. However, there are barriers to capitalising on the current position, including financial, institutional, strategic and resourcing limitations. A better understanding of the breadth of possibilities will facilitate decision making.

Impact of new technologies: The evolving new technologies will have a growing and direct impact on a number of areas – in particular, the delivery of education and the provision of student support systems, both in the UK and when delivered internationally. The need is to exploit the potential of such technologies to the full. Prospective international students regularly turn to the internet as their primary source of detailed information on global education opportunities. The challenge is to keep pace with internet developments and manage marketing and delivery efforts accordingly.

Resource constraints: The last five years have seen strong growth in demand from both domestic UK and international students for places in UK higher education institutions. However, resource constraints – both human and physical – are becoming more apparent.

New partnerships: UK institutions have been at the forefront of developments to grow new partnerships to deliver programmes internationally in a wide range of innovative approaches (both with the public and private sectors). However, work is needed to disseminate good practice more effectively in this area of activity.

1.4 Objectives for the study

Given the increased interest in all aspects of international education in the UK and driven by strong financial, institutional development and government concerns, the British Council and various representatives of the UK higher education sector agreed that further research into global trends of international student mobility was necessary – in particular, to analyse these trends from a UK perspective.

This research was therefore conceived with the following objectives:

- To provide a current analysis and projections of the patterns of global demand for international students – both in terms of their home country and destination countries
- To assess the key factors that influence the UK share of the global market for international students and to employ these to forecast likely demand to 2020
- To review any other factors that could influence the above and assess their impact, particularly those related to the wider context of internationalisation
- To forecast the likely demand for transnational education programmes for the period to 2020.

The overall intention was to make available the research findings, analysis and forecasts to facilitate decision-making, help formulate strategy and assist in making investment and related decisions. The main user groups for the research were identified as:

- strategic decision makers in higher education institutions throughout the world
- strategic decision and policy makers in government, national organisations and representative bodies
- practitioners involved in international student recruitment
- professionals and practitioners engaged in the delivery of programmes transnationally.

1.5 Research into the changing patterns of demand for international student places

IDP Education Australia: In 2002, IDP Education Australia developed forecasts of the global demand for international higher education student places. This study, entitled *Global Student Mobility 2025: Forecasts of Global Demand for Higher Education*, projected a four-fold increase in the global demand for international higher education student places by 2025. The implications generated extensive debate globally.

In 2003, the analytical capacity of the global forecasting model used in 2002 was extended. The new study sought to examine empirically the factors influencing the major English-speaking destination countries' share of the global demand for international higher education student places.

Linking changes in consumer behaviour with macro-forecasting is complex. However, in partnership with the Centre for International Economics, a discrete choice model was applied to forecasts of demand for international higher education student places. This helped to develop a greater understanding of likely future trends in international student places.

The British Council: Over the last three years, the British Council has been undertaking research studies with the polling organisation MORI into the perceptions of international students while they are still in their home country, while in the UK and then on return home.

Although the British Council has undertaken a number of internal studies to consider changing patterns of global demand for international students, it has never previously had the opportunity to undertake a large international study to review and model the combination of macroeconomic and educational factors that may effect student mobility.

Co-operation between the UK and Australia

The British Council had discussed with its UK partner institutions the possibility of undertaking research to predict future global patterns of international student mobility. However, the opportunity that arose through co-operation with IDP Education Australia was considered to be the most effective way forward; the lessons that could be learned through building on the initial IDP research were seen to be significant.

Discussions between the British Council and sector representatives in the UK led to an agreement that an appropriately developed version of the IDP research could be applicable and useful for the UK. The British Council and Universities UK agreed to form a Technical Advisory Group, comprising academics and practitioners active in the field, to ensure that all appropriate considerations were included in the research. Some UK-specific changes were proposed, and these included:

- refining the attractiveness factors in the light of the British Council's own detailed research on student perceptions commissioned through MORI
- focusing on a wider range of key countries, as the UK traditionally has a more diversified base of source countries for students than most others
- considering in more detail activities across Europe – especially in the early stages of the forecast period when at least ten new states are scheduled to join the EU
- considering the demand for transnational education as complementing the study overseas option rather than as a substitute
- assessing the impact of supply side constraints – both in the UK and in some of the larger source countries
- considering the differences in demand for postgraduate and undergraduate education
- considering the pattern of demand for subjects.

These changes were included in various ways in a refined approach proposed in discussions with IDP. Some of the additional analysis required had to be undertaken independently of the model. The methodology is discussed in chapter 2 and in parts of chapter 3.

Much thought was given to the logic behind the UK collaborating with Australia – a major international competitor in this activity for the UK. Indeed, Australia has been very successful over the last few years in winning market share from the UK, particularly in Asia. However, it was the view of all concerned that the need to understand better the main drivers and trends in the global demand for international student places overrode such concerns.

1.6 Glossary

The terminology associated with global student mobility and international student places is complex and often confusing. Some terms that are commonly used in the report are explained here; others are discussed as they appear in the report. Importantly, given that the projections are restricted to the higher education sector, the term 'student' in this report refers to a higher education student, unless otherwise stated.

Where possible, the authors of this report have categorised students as being either international or transnational.

Compositional effect: This term is used when describing the results of the base scenario. It refers to the effect of changing demographic, economic and educational situations in source countries on the size of the global demand for international student places, and in particular the UK's market share of MESDCs. Changes in the UK global market share are therefore a direct result of the changes in these variables at the country level. Note that it is assumed that in this situation there is no contribution to change due to attractiveness factors. For further information, see section 2.3.

Cross-elasticities of demand: See 'Elasticities of demand'

Demand: The number of international student places demanded by students as forecast in this report is potentially different from the number of international students that will actually be enrolled. This is because supply factors (i.e. factors related to the provision of higher education places) are not explicitly taken into account in the global forecasting model. For further information, see the paragraph 'demand versus enrolments' in section 2.1.3.

Discrete choice model: The model that determines and quantifies the influence of each primary attractiveness factor upon a destination country's market share, based on an analysis of the historical relationship between that country's market share and performance with regards to these factors.

Elasticities of demand: The outputs of the discrete choice model are elasticities of demand. They predict how changes in a country's perceived performance on a discriminating attribute may affect changes in a country's market share, for students from each source region and country. 'Cross-elasticities' simply refers to the impact of the positive or negative performance of destination country with regard to a discriminating attribute, on every other destination country. For example, a positive improvement of 1 per cent in the performance of UK with regard to employment prospects for students from the Middle East region may lead to a decline of 0.27 per cent in the market share of each competitor destination country, for that source region.

Global forecasting model: The model that gives forecasts of international students in an international education destination as its output. See section 2.1 for further information.

Growth rates: The growth rates referred to in this report are compound annual growth rates. They have been calculated using the LOGEST formula, which is provided in Microsoft Excel. The LOGEST approach is commonly used in forecasting because, unlike a conventional growth formula, which is based on the end-points of the data (the beginning and the end), LOGEST averages the logarithms of the year-to-year growth ratios, thus taking into account all of the data.

Higher education students (also referred to in this report simply as 'students'): The global forecasting model is based on 'third level' UNESCO (1996) data, which includes education provided at 'universities, teachers' colleges and higher professional schools'. Thus, the data do not include enrolments at the vocational and technical level.

Income per capita: In this report, the terms 'income per capita', 'GDP per capita' and 'GNP per capita' are used interchangeably, even though they are strictly distinct. For the data collection and analysis, GNP was used wherever possible, but often only GDP was available. Following general practice, either was used as a proxy for income, depending on which was available.

Income elasticities: This term is used in the report to describe the extent to which a change in a source country's income per capita will lead to a change in domestic and international higher education participation rates in that country.

International access ratio: This refers to the ratio of international higher education students from a source country to the total number of higher education students from that country (whether studying domestically or internationally).

International students: International students are those students who fall into the WTO's General Agreements on Trade in Services category of consumption abroad – that is, those students who travel from one country to the country of the education provider in order to obtain education or training.

Major English Speaking Destination Countries (MESDCs): This group of countries includes the United Kingdom, United States, Australia, Canada and New Zealand, in their capacity as destinations for international students.

Primary attractiveness factors: Those factors of choice that the project team has identified as the major characteristics of destinations determineing students' choice of an international education English-speaking destination. They include quality of education, employment prospects, affordability, lifestyle, personal security and education accessibility.

Regions: The regional classifications used in this project, and the countries in each region, are shown in Appendix B.

Transnational students: Transnational students are those students who fall into the General Agreement on Trade in Services (GATS) categories of commercial presence (the education provider establishes a presence in another country), cross-border supply (the education service is delivered by distance education) or presence of natural persons (the educator travels to another country to supply the education services). Transnational education programmes (TNE) refer to the courses of study undertaken by transnational students.

The delivery modes associated with transnational students are more commonly referred to and encompass: distance learning (including e-delivery), franchising, validation, licensing, twinning and partnership arrangements, offshore or overseas campuses, etc.

UK market share: Unless otherwise specified, the UK market share in this report refers to the number of international students in the UK relative to the number in all major English speaking destination countries.

1.7 Forecasting in a changing world

Underlying the forecasts presented in this report are key assumptions regarding world order and stability. Forecasting continued growth in the global economy, in part, relies on an assumption that the world will not experience a major worldwide catastrophe – man-made or natural.

While international education is a resilient industry and has, for example, continued to experience growth despite the Asian economic crisis and recent terrorist attacks, the future growth of international education relies on a world order that allows and encourages the movement of people and ideas. Just as the terrorist attacks were unexpected, this report cannot predict potential changes in the future world order.

Furthermore, this report does not address possible future changes in social attitudes within the United Kingdom that may either enhance or restrict the United Kingdom's engagement in international education. These important issues and their implications for international education are areas for further research and consideration.

2 Research design

'Education is the most powerful weapon which you can use to change the world.'

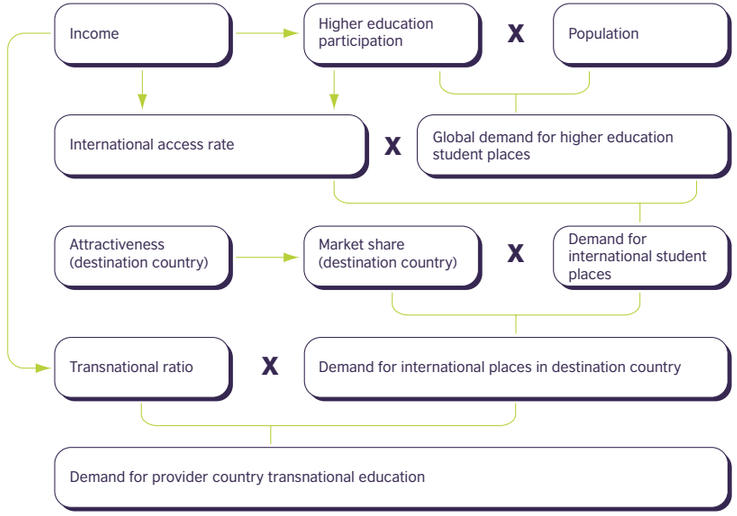
Nelson Mandela

2.1 Global Forecasting Model

The model used in this project is named the Global Forecasting Model, which is the same model used by IDP for their Australian research in 2003, and very similar to the model they used for their original *Global Student Mobility 2025* publication in 2002. Although the model was used on these occasions specifically for the Australian situation, it is easily transferable for use with other international education destinations.

The model is presented schematically in Figure 2.1.1 below.

Figure 2.1.1
The Global Forecasting Model



The foundation of the forecasting model is the understanding, based on empirical analysis, that the demand for international student places from a source country is related to the demand within that country for domestic higher education student places. That is, the higher the demand for domestic student places, the greater the demand for international student places. This is not a simple linear relationship as it varies according to the level of income and higher education participation.

Demand for higher education student places

The Global Forecasting Model forecasts the global demand for higher education based on the empirically verified relationship between higher education participation rates and national income. Put simply, as income rises, so too does the level of participation in higher education. Lower income countries initially experience sharp increases in participation and higher income countries experience only marginal increases.

Using United Nations forecasts of income and population growth, the model generates forecasts of the demand for higher education for each source country.

Demand for international higher education student places

To determine the global demand for international higher education student places, an international access ratio was applied to the forecasts of the global demand for higher education. The international access ratio is the ratio of international students to total students in each country. It was determined in the model by higher education participation rates and per capita income. It is important to note that the nature of change in the international access ratio varies from country to country according to existing higher education participation and income. Within the model, the international access ratios for each country are tracked using these relationships.

International demand for UK higher education student places

Having identified the global demand for international higher education student places, the UK's projected market share was applied to the model to determine the global demand for UK higher education. Determining this share involved the development of a discrete choice model. This is discussed in detail in the next section.

The Global Forecasting Model forecast each of these demands for 144 source countries. These demands could then be aggregated to give forecasts from each major world region, and global forecasts.

This UK report focuses on the demand by international students for higher education courses delivered onshore in the UK. Some additional projections for UK education delivered transnationally, either offshore or by distance learning, are given and the approach for this is explained in the appropriate section of the report.

The global projections are for all higher education and do not normally distinguish between undergraduate and postgraduate demand, or demand for different subject areas. Separate exercises to model these categories have been undertaken and are reported.

The report does not cover further and school-level education or the demand for English language programmes. However, the report will be important to these sectors given that increasingly many students are choosing to enrol in such programmes as pathways into higher education.

Demand versus enrolments

It is important to distinguish between demand for enrolments and actual enrolments. The demand for enrolments represents individuals who are willing and able to undertake a higher education. In contrast, actual enrolments include those who are willing, able and have been accepted by a higher education institution. In this context, actual enrolments relate to both demand and supply factors. Importantly, the Global Forecasting Model produces forecasts of the demand for enrolments, the measure of demand for individual student places.

Period for the study

At the time that the forecasts were generated, the most recent statistics available showing actual international student numbers in the UK were from the 2001–02 academic year. In addition, at the time of generating the forecasts there were no finalised academic year international student numbers from any of the MESDCs beyond 2002. Therefore, the starting year employed for all the forecasts is 2003; the results for this year were obtained by projecting forward all country data from their common point in time, which is 2002.

However, since generating the forecasts, 2002–03 data have been received from the Higher Education Statistics Agency (HESA). These figures indicate a considerable increase in numbers of international higher education students in the UK compared with the 2003 projections. It was agreed not to re-run the model with these new data, as the underlying basis of the work – that is, to investigate long-term trends, is not undermined. There will always be events that will have a short-term impact but their effect will normally be dissipated over time.

In the case of forecasting, based on the 2002–03 HESA data, the question is whether the more than 20 per cent increase in international student numbers in the UK in one year will be sustained or whether numbers will drop back over the short term in line with the general projections. This will be monitored over the next two years and these results updated accordingly.

Data issues

The key source of data for higher education used in the Global Forecasting Model is UNESCO, in particular the *2001 World Education Report* and the associated online databases.[5]

The base period for most of the UNESCO data is 1996, although data for 1996 are not complete for all regions. Where suitable 1996 data from other sources have been unavailable, the country has been excluded from the analysis.

UNESCO also publishes population and gross national product (GNP) per capita data, and this also forms part of the base data. The time series analysis is based on real GNP per capita and population from the World Bank,[6] while demographic projections are taken from the United Nations Population Division's latest series of projections.[7]

UNESCO does not currently publish any information for Taiwan. As Taiwan is an important source of international students for the UK, comparable Taiwanese data have been obtained directly from the *Taiwan Statistical Yearbook*. The latest published UNESCO data on international students generally refer to 1995 or 1996 as the base period. UNESCO data for the UK have therefore been updated using more recent official statistics.[8]

Further, more recent international student data are available for Australia, New Zealand, Canada, UK and the US. The more recent data have been used to check and calibrate the historical forecasts from 1996 to the present.

Data for Hong Kong have been shown separately. This facilitated trend analysis for comparison with both historical data and other MESDC statistics.

The Global Forecasting Model (GFM) employed a single model to cover as many individual countries as possible. Data for 144 individual source countries were included in the final model.

[5] *UNESCO (2001). World Education Report 2000 – Education Indicators, available from UNESCO website (www.unesco.org/education/information/wer/htmlENG/tablesmen.htm). Also UNESCO Institute for Statistics (2002). Education Statistics, www uis.unesco.org/ev.php?URL_ID_DO=DO_TOPIC&URL_SECTION=201*

[6] *The World Bank Group (2002). World Bank – Data and Statistics – Data by Country. [Data files]. Available from World Bank website www.worldbank.org/data/countrydata/countrydata.html*

[7] *United Nations Population Divison (2002). World Population Prospects: The 2002 Revision Database [Data file]. Available from United Nations Population Divison website http://esa.un.org/unpp*

[8] *In particular, Australian Education International (2002). Overseas Student Statistics 2000, Ausinfo, Canberra, plus customised data from Department of Education, Science and Training, Australia (2002). Higher Education Statistics Collection, www.dest.gov.au*

2.2 Discrete choice modelling in international education

What is discrete choice modelling?

A subset of general choice theory, discrete choice analysis[9] originated from studies of stimulus and response in psychology in the 1920s. It was taken up in economics in late 1950s and early 1960s. Daniel McFadden, an early pioneer of discrete choice modelling, won the Nobel Economics Prize in 2000 for his work in the area.

Discrete choice models are applicable to situations in which the alternatives in the choice set are mutually exclusive, exhaustive and finite. Thus, they are used in cases where only one alternative can be chosen, rather than those in which choices occur along a continuum.

Discrete choice models have been applied to many areas, including choice of transport mode, tourist and recreation destination choices and occupational choice, as well as to various environmental applications. It has been extensively used for analysis of trends in industries such as transport, agriculture and farming and it is widely used by public sector organisations for modelling purposes.

How does discrete choice modelling apply to international students?

The UK's market share of the demand for international higher education student places in the major English-speaking destination countries (MESDCs) refers to the percentage of international students from any particular country or region that choose to study in the UK.

The UK's market share is a function of the initial share, changes in the UK's relative attractiveness compared with other destination countries and a response elasticity that is itself a function of the market share.

The attractiveness model is based on the discrete choice model framework – that is, students need to make a discrete choice of a study destination and this choice is based on the attributes of the alternative destinations that they are considering.

Given a set of attributes for different destination countries, the discrete choice framework is designed to calculate the probability that students will choose a particular destination country. When aggregated, this probability is equivalent to the market share of a particular destination. With information on how particular attributes or factors are likely to change over time, it is then possible to forecast the market share of a particular choice.

Most commonly, discrete choice analysis uses a cumulative logistic probability function (commonly referred to as 'logit' to specify the relationship between probability of choice (market share) and the factors of the choices.

A logistic function is an S-curve. As a country's performance factor (for example, price or quality) improves, then the probability that students will choose that destination increases slowly at first, then more rapidly, then slowly again as the probability approaches 1. When applied to market share, this S-curve models market maturity in a competitive market.

For example, consider an example of two destination countries (A and B) for students and that there are two attributes for these destinations, price (P) and quality (Q). Under a 'logit' function, the probability of students choosing A (Prob (A)) is given by:

$$Prob(A) = \frac{e^{\beta_1 P_A + \beta_2 Q_A}}{e^{\beta_1 P_A + \beta_2 Q_A} + e^{\beta_1 P_B + \beta_2 Q_B}}$$

In this equation, the ß's are parameters to be estimated. The probability of students choosing B is the same, except with the price and quality of B on the numerator. The two probabilities clearly add to 1 in this case.

This formula naturally extends as more destinations and attributes are included. With sufficient data, it is possible to calibrate (or statistically estimate) the parameters of the function.

It is important to bear in mind that, given the lack of comparative data between choices of destination countries in the international education arena, the attractiveness ratings were developed by the British Council, IDP and representatives of the UK's international education industry.

Using the discrete choice model to forecast demand for UK international student places

The research team undertook a six-step process to determine the UK's forecast market share of the global demand for international higher education student places, using a discrete choice model. Each step is outlined below.

Step 1: Determine the consideration set

The first step in the development of the discrete choice model was to identify the range of choices for the consumer, and in doing so to determine the UK's competitors. In the case of international education choice, the competitive set for the UK was defined as the United States, Australia, Canada and New Zealand. These countries are referred to as the five major English speaking destination countries or MESDCs.

It was recognised that the competitor set may vary between source countries and may include non-English speaking countries. For example, Chinese students may consider international study options in Japan or European students may consider Italy as a study option. However, market research with international students in UK, USA and Australia generally indicates that the five MESDCs largely define the competitor set.[10]

Step 2: Determine the UK's share of international students in five MESDCs

The UK's current share of international students in the five MESDCs provides the basis for the projected market share. The project team collected detailed information on the UK's historical performance, or international student flows, from each of the source countries included in the Global Forecasting Model based on UNESCO data updated with the latest international student statistics.

Step 3: Determine the primary attractiveness factors for destination countries

There is a growing body of market research into the factors influencing international students' choice of destination country.[11] This research has identified a wide range of factors influencing choice of destination country – from climate of the destination country to the costs of obtaining a student visa.

However, research available on factors influencing choice of destination countries by international students has focused on analysing key factors in choosing one particular destination country. There is no publicly available research on discrete choice by all major destination countries.

Based on a detailed review of existing market research, the project team identified a set of primary attractiveness factors that influence the choice of destination country. These factors are outlined in Table 2.2.1 below and were generally applicable across all major source regions.

The primary attractiveness factors outlined in Table 2.2.1 have been incorporated into the model as the key factors determining the attractiveness of the five MESDCs. Importantly, these factors reflect students' perceptions and not necessarily reality. For example, affordability does not reflect the objective cost of an international education in a destination country based on actual costs and exchange rates; rather it reflects the students' perception of affordability.

Table 2.2.1

Primary attractiveness factors

Attribute	Description
Quality of education	Relates to the education process. It broadly corresponds to the academic reputation, academic and social support and flexibility and diversity of course delivered. It includes aspects such as resources and teaching skills, and whether the curriculum is in tune with economic, social, political, cultural and environment realities of the local country and the world.
Employment prospects	This factor is related to the education outcome. It refers to the value of a destination country's qualifications within the local and global labour markets, and to this extent it includes both the ability to obtain employment as well as the relative return within the labour market over a period of time.
Affordability	Affordability is related to students' perceptions of the cost of living and tuition fees in a particular study destination[12]. A high performance rating for affordability for a destination country implies that the destination is perceived as being relatively lower-cost than other destination countries.
Personal security	Personal security refers to the general perception of safety and security within the destination country.
Lifestyle	Lifestyle encompasses lifestyle factors such as sports, music, fashion, nightlife as well as other cultural factors such as cultural tolerance, acceptance, similarity or difference.
Education accessibility	Education accessibility is defined as the ease of access to institutions and programmes offered by a particular destination country. This is quite different from 'country accessibility', which includes supply-side issues that can facilitate or set up barriers to demand, such as visa regulations.

[9] *See, for example,* Discrete Choice Analysis *by Ben-Akiva and Lerman, MIT Press 1993, or* Discrete Choice Methods with Simulation *by K Train, Cambridge University Press, 2003.*

[10] *For example, according to Doorbar and Associates' (2001) survey of Asian students in the MESDCs, the top three preferred destination countries were the UK, US and Australia. Over 70 per cent, 51 percent and 38 per cent of responses respectively preferred these destinations. Canada and New Zealand were preferred by only 8 per cent and 2 per cent of that sample.*

[11] *Doorbar, A. and Associates (2001), plus Australian Education International (2001), plus IDP Education Australia (2001), plus IDP Education Australia (2000), plus IDP Education Australia (1999), IDP Education Australia (1997). For full details, please see Appendix A.*

12 It differs from the 'value for money' concept in that it is not possible to isolate the impact of perception of quality from the perception of cost. Hence, affordability enables analysis of the potential impact of price without necessarily having to consider 'value'. Furthermore it is possible to provide high value for money while being unaffordable or, alternatively, it is possible for a destination country to be both low value for money and unaffordable.

Step 4: Determine performance ratings for each primary attractiveness factor

In order to complete the parameters of the primary attractiveness factors, the project team determined the relative performance of each of the five destination countries for each of the primary attractiveness factors over time. This represented the central input into the discrete choice model.

This analysis was undertaken at the regional level. The broad regional groupings included in the Global Forecasting Model include:

- Sub-Saharan Africa and North Africa
- Middle East
- East Asia (including all East Asian countries north of Vietnam), South East Asia, South Asia (including the Indian sub-continent and Sri Lanka) and Central Asia (including mainly former Soviet republics)
- North America, Central America and South America
- Western Europe and Eastern Europe
- Oceania.

A full list of the countries in each regional grouping can be found in Appendix B.

For the purposes of model calibration, historical data from 1998 to 2003 were required. On the basis of these data templates were completed by the project team for each region, defining each attractiveness factor for each MESDC over the timespan of the projections.

A sample of a section of a template completed by the project team, which shows how the performance ratings for the primary attractiveness factors were recorded, is provided in Table 2.2.2.

Table 2.2.2

Section of template – North America 1997 for attractiveness factors and MESDCs

North America	1997	1997	1997	1997	1997
	US	UK	AUS	CAN	NZ
Quality of education	10	9	3	9	3
Employment prospects	10	8	3	9	2
Affordability	2	3	7	4	8
Personal security	3	8	9	9	10
Lifestyle	8	5	9	9	5
Education accessibility	10	7	3	10	1

(1 = low performance, 10 = high performance)

The final attractiveness templates were agreed on by the project team following an intensive multi-day workshop drawing upon existing research plus the expert knowledge of team members.

Step 5: Statistical calibration

At the conclusion of step 4, the research team had developed two large data sets. One data set analysed the historical performance of the MESDCs in attracting international students from 13 regions between 1997 and 2002 inclusive. That is, the actual size of international student flows. The other data set compared the relative performance of the MESDCs based on the primary attractiveness factors in each of the 13 regions over the same time period.

Through a statistical calibration exercise, the research team assessed the extent to which changes in each of the primary attractiveness factors influenced changes in market share over the period 1997 to 2002 in the MESDCs. In this way, the statistical calibration identified underlying parameters and elasticities for each of the primary attractiveness factors in each region. These elasticities enabled the research team to determine quantitatively how a small change in students' perceptions of the UK on any of the primary attractiveness factors in any region would impact on the UK's share of that market.

The UK's market shares could then be applied to the forecast demand for international higher education student places in the major English-speaking countries, to give the demand for UK international higher education student places.

Step 6: Identify potential supply side factors

Clearly, the number of international students in a destination country may be influenced by a number of factors other than the destination country's performance in the primary attractiveness factors. For example, a range of supply side factors, such as government regulations, may influence the number of international students from a particular country or region studying in a particular destination country.

On this basis, the research team analysed the potential institutional and government supply barriers that could limit the current or future demand for international student places in UK institutions.

2.3 Forecast scenarios

In order to forecast the demand of international students going to the United Kingdom, the following variables were included in the Global Forecasting Model:

- projected income growth
- projected population growth
- projected higher education participation rates
- projected international access rates
- projected share of total international students for the five MESDCs
- projected UK share of international students in the five MESDCs, that are based on projected performance ratings for each of the MESDCs.

The project team developed a number of scenarios affecting the UK by considering the following global change drivers and their potential impact on the global demand for higher education in the UK:

- globalisation and mobility trends
- knowledge economies
- global trade in services
- lifelong learning
- increasing competition
- technology and new modes of delivery
- expectations and needs of students.

Through the use of scenarios – that is, different combinations of these change drivers – it is possible to form an understanding of fundamental changes in demand for international student places and their differing impact on the attractiveness, and hence market share, of destination countries. Thus, while most of the variables used in the forecasting model remain the same throughout all scenarios, the projected UK market share is the one variable that will differ.

Detailed discussions within the project team identified the scenarios described in sections 2.3.1 to 2.3.5. These scenarios are also briefly presented in Table 2.3.1.

Table 2.3.1

Summary of scenarios for international education in the UK

Scenario name	Scenario description
Base	This scenario is based on holding the UK's performance on each of the primary attractiveness factors constant over the forecast period. Changes that occur in the UK's overall market share are compositional changes – that is, related to the UK's current share in growing or declining markets
Optimistic	This represents the best case for the UK. It assumes that the UK will consistently improve its performance in all the key attractiveness attributes over the forecast period.
Pessimistic	This is the worst-case scenario, which assumes that the UK will experience a decline in all its attractiveness attributes.
Price escalation	This assumes a large decline in the perceived performance of UK in terms of affordability. This could result from a variety of reasons: lack of places in UK institutions; large price increases, etc.
EU impact	This scenario looks only at Europe and how the accession of new states to the EU as well as domestic policy may affect demand.

Base scenario

This provides a reference against which the other scenarios can be benchmarked. It is based on holding the UK's performance on each of the primary attractiveness factors constant over the forecast period.

Described another way, it is assumed that the market shares for the MESDCs within any particular origin country remain the same throughout the forecast period. That is, if the UK has a share of X per cent in country Y, then this share is assumed to remain unchanged. Such a constant share would come about if the attractiveness factors remained constant for all destination countries.

Optimistic scenario

In this scenario, there is an increasing recognition by employers and prospective students of the benefits of broader academic education over a narrow skill-based education. In this context, the UK is well positioned given its strong reputation for academic excellence and its breadth of student choice. Furthermore, effective and cohesive marketing of UK education, continuing the directions established under the Prime Minister's Initiative, lead to an increase in the perception of UK education quality relative to other destination countries. This is reinforced by the establishment of effective quality-assurance processes to ensure that any new education providers do not detract from the current perception of UK quality within the international markets. New market entrants ease some of the supply constraints experienced by the traditional providers, leading to improved access to UK education. Finally, over the forecast period, the UK experiences a more favourable exchange rate, although this scenario assumes no major changes in the underlying levels of tuition fees and living costs.

The impact:

- relative increases for the UK in:
  - employment prospects
  - quality of education
  - affordability
  - education accessibility.
- performance ratings for other competitor countries remain constant over time.

Pessimistic scenario

This projects a series of simultaneous events that have a large negative impact on the perception of UK education in the international education markets related to all the key attractiveness factors. The model assumes all these impact together early in the forecast period (from 2005) as a means towards assessing the largest possible effect they could have for the UK over the timescale of the forecasts. A number of factors might contribute to a rapid growth in negative perceptions, including:

- A reduction in the perception of the UK as a quality destination. Possible causes might include: the strong correlation between leading research and teaching quality being eroded due to a de-coupling of research and teaching in some institutions; and 'problems' associated with the quality of some UK higher education programmes delivered transnationally that are highlighted in the international press.
- Employers increasingly seeking skill-based training, as opposed to more 'academically orientated' education. In this context, the USA improves its recognition as a leader in industry-driven education at the expense of the UK.
- The slower take-up of GATS leads to increased capacity constraints in the short term, significantly reducing the perception of the accessibility of UK education.
- A significant increase in the total cost of studying in the UK, driven by increases in the cost of living, increasing tuition fees driven up by supply constraints and an unfavourable exchange rate. At the same time, students become more sensitive to changes in price as market information improves with enhanced global communications.
- Fast-increasing numbers of Chinese and South Asian students studying on campus in the UK is seen as impacting negatively on the perceptions of diversity. This will have a direct impact on North American and European students seeking the unique 'UK experience'.

The impact:

- the affordability of UK education declines, then very slowly recovers (but not to previous levels)
- a price elasticity of market share increases significantly;
- a strong decline in the perceptions of education accessibility, then recovery to 2020, although not to previous levels
- a strong decline in the perceptions of quality of education and employment prospects, then recovery but not to historical levels
- a strong decline in the perceptions of lifestyle, then constant until 2020
- increased employment prospects for the United States.

Price escalation scenario

Under this scenario, in response to the increased demand for UK education and the lack of places available, UK institutions seek to ration the supply of places by significantly increasing tuition fees.

While the increase in price has a negative impact on affordability, it does lead to an unexpected increase in the perceptions of quality within the market. However, this is likely to be a short-term effect as the improvement in global communications results in more detailed information being available. With better market information, prospective students are able to determine that the increased prices were a result of limited supply and not an increase in quality. Over time, perceptions of quality and employment prospects return to former levels.

The impact:

- a strong decline in affordability, then slow recovery
- a strong initial increase in the perceptions of quality of education and employment prospects, then relative decline.

European Union impact scenario

Within this scenario, the impact of the accession of ten Eastern European countries (Cyprus, Lithuania, Czech Republic, Estonia, Poland, Hungary, Slovakia, Latvia, Slovenia and Malta) into the European Union in 2004 is considered. This will be followed by the accession of Bulgaria and Romania in 2008. Turkey has also been included in the projections, assuming that they will also join the EU in 2008 – although it is recognised that a date has yet to be set.

The accession countries will have a profound impact on the demand for higher education in the UK for the following reasons:

- There will be a dramatic increase in the perceptions of the affordability of UK education for prospective international students from the accession countries as they will be required to pay only domestic student fees. However, this will be tempered by the proposed increase in UK domestic student fees (possibly to £3,000 in 2006) – although all EU students will be entitled to the same fee deferment as domestic students. This is essentially a loan to meet the fees that will be repayable only when the student has achieved a target salary in their subsequent employment.
- Given the broad range of widely publicised EU programmes aimed at promoting intra-European mobility of students, it is likely that UK education will be perceived as more accessible.
- There will be an increase in the perception of employability. A UK higher education qualification will provide greater access to employment across EU states over time – and more immediately in the UK.

The UK is proceeding to introduce tuition fees for domestic students in higher education at a faster rate than other EU member states. As EU students must also pay these rates, this may have a continuing negative impact.

The impact:

- an increase in most of the UK's attractiveness factors from the point of view of the accession countries
- an increase in the employment prospects and accessibility of UK's education ratings by 20 per cent for all new EU states from 2005 and for Bulgaria, Romania and Turkey from 2009
- an increase in the affordability ratings in 2005 for the accession states, then a slight decrease in the ratings in 2006 with a gradual increase again over time
- Turkey and Cyprus international access rates remain constant over time.

From scenarios to forecasts . . .

Each of the scenario assumptions necessitates differing future performance ratings for each of the primary attractiveness factors and for each of the MESDCs. These sets of differing ratings were incorporated into the discrete choice model to generate projected market shares for the UK in each of the source countries included in the Global Forecasting Model. Applying these projected UK market shares to the forecast total demand for international higher education student places in MESDCs, forecasts of the global demand for UK higher education were developed for each scenario.

2.4 Further analyses of the nature of demand for UK international student places

While not part of the Global Forecasting Model, a number of other characteristics of interest to international education practitioners have been analysed. The results for these analyses are reported with the forecasts in chapter 3. In each case, the forecasts of international students in the UK, as derived from the global forecasting model, provide a basis for these analyses to be overlaid.

These analyses include the following:

- forecasts by level of study
- forecasts by subject area
- gender considerations
- forecasts of demand for transnational higher education delivered by UK institutions
- implications for demand in the UK if education provision increases in certain key source countries
- funding sources of international students in the UK
- domestic to international student number ratios in UK universities
- how global student mobility from the UK compares to mobility to the UK.

Level of study

Understanding the future split between postgraduate and undergraduate demand is important for a number of reasons, including decisions regarding allocation of international marketing resources, as well as influencing how an institution or country perceives or would like to perceive itself internationally, e.g. as a research institution, teaching institution etc.

As part of this project, the proportion of students studying from each major region at the following different levels was forecast to 2020: postgraduate research, postgraduate taught courses, first degree, and other undergraduate students (such as study abroad programme students).

These proportions were forecast by observing the historical patterns with regard to proportions studying at each level, and then applying this pattern into the future.

In particular, three assumptions have been made:

- First, that the growth or decline in the share of students studying at any particular level follows an 's-shaped' curve – for example, the proportion of students following postgraduate taught programmes may initially increase rapidly for a variety of reasons, but this increase will eventually taper off. In this way, the market maturity theory, as described earlier in the discussion concerning the discrete choice model, is applied. In this case, each cohort of students from a particular area at a particular level of study is treated as a sub-market.
- Second, it has been assumed that there are upper and lower limits to the proportions of students in particular levels of study. For example, it is highly unlikely that 90 per cent of students from any particular region will be studying at the postgraduate research level, although there will normally always be some studying at this level. These limits were set using the judgement of the project team.
- Third, observing markets has shown that, as a regional or country market grows in maturity, the numbers of postgraduate taught students, as well as undergraduate students, rise more rapidly than those of postgraduate research students.

Finally, the forecast proportions, calculated at a regional level, were then applied to the forecast total student numbers from the respective regions.

Subject area

The concept was to forecast the proportions of international students by subject area, in the same way as it was done for levels of study – that is, by examining past trends with regard to the breakdown share of students in each subject area from each region and then projecting these patterns forward.

However, the available historical data did not show many consistently upward or downward pattern in the shares of students in each subject area. Therefore, the decision was made to take a weighted average of the share of each subject area for each source region of students for the last four years, and then to apply this average to all years between 2004 and 2020. The shares in more recent years were given heavier weightings than those in earlier years. For example, if the share of students from region A for subject area B was 20 per cent, 19 per cent, 22 per cent and 23 per cent over the last four years, the resultant weighted average is 21.6 per cent, compared to 21 per cent if the average was not weighted.

In some cases, where a clear pattern was obvious, a weighted average was not taken and in such cases the market shares were forecast forward using the same method as was outlined in the level of study analysis (see above). This was the case for computer science for which the historical data showed an upward trend in market share over time, in a number of different regions. Once again, reasonable limits were applied to the magnitude of such growth.

The following cautions need to be understood when considering level of study and subject area forecasts:

- There is a lack of historic data to establish reliable trends, particularly for the subject area analysis.
- There is likely to be differentiation of each of the subject areas as a regional market matures and evolves – as comparison with mature source markets (e.g. Europe and USA) indicates.
- Changing subject patterns can be driven by currently unforeseen changes in the demand for employable skills.

Historic data indicates some degree of stability in patterns, so the forecasts by subject area are likely to be more reliable over the period to 2010 but becoming increasingly less certain beyond then.

Transnational education

Based on the model for demand for international student places in the UK, a separate analysis has been run to model demand for UK transnational programmes

Reliable data on the number of students studying on transnational programmes is limited. Comprehensive data is available for Australian programmes, and this was used in the original Australian study to model demand for students studying Australian transnational programmes. As more data has become available for UK programmes, a similar approach has been used to model demand for UK transnational programmes.

Demand for transnational education provided by UK suppliers is modelled as a fraction of the demand for international student places in the UK. The methodology assumes that transnational education will lead to an overall growth in demand, rather than that some of the student demand that is predicted for study in the UK will be satisfied instead by transnational education.

The first step was to define the current transnational ratio for each source country. It is then assumed that this ratio will grow over time, according to an income elasticity factor representing the responsiveness of participation rates to changes in income and the rate of growth in per capita income (the same factors that influence the demand for in-country provision). The number of students opting for UK transnational education at any given time in the future is then calculated by applying this ratio to demand for study in the UK.

This approach implicitly assumes that international education in the UK and transnational education at UK institutions are complements, not substitutes, and that it is attractiveness of the UK as an education provider that is the main determinant for education choice.

Data was sourced from a survey of British Council offices in key markets. They were able to provide information on the number of programmes offered by UK institutions in each country. In addition, a 1997 Institute of Development Studies (University of Sussex) survey was used to check and confirm estimates.[13]

Based on these analyses, the number of students on UK transnational programmes in each market was estimated. Recently released HESA data, although incomplete, broadly confirmed these estimates.[14]

[13] *IDS Working Paper 75 'The Internationalisation of Higher education', Paul Benell and Terry Pearce. For this paper, a survey was conducted and data was collected from 109 out of a total of 124 universities in the UK for 1997. For a total of 31 institutions these figures relate to 1994–95 or 1996 data which was gathered from CVU and UKCOSA surveys.*

[14] *86 institutions (50 per cent in total) returned data to HESA on students studying for the whole of their course overseas in 2002–03.*

3 Analysis and forecasts

‘The study clearly demonstrates the impact of the two factors that have emerged to be of overriding importance … these are the perceived quality of the provision in the UK and the future employment prospects associated with the UK qualification obtained.’

Vision 2020, section 3.2

3.1 Analysis of the UK’s market share

Understanding the historical changes in the UK’s global market share of international higher education students provides an important foundation for the development of strategy, policy and planning within governments, institutions and the private sector.

Among the five MESDCs, the UK has the second largest market share after the US. However, until recently, the gap between the US and the UK appeared to be increasing.

Considering the period between 1997–98 and 2001–02, the total number of international student numbers in the UK has increased by about 19 per cent. The compound annual growth rate since 1997, although still positive at 3.5 per cent, is the smallest rate of the major competitor countries. However, if the recently available UK data for 2002–03 is included, then a more positive improvement is seen. In this case, the compound rate of growth over the last three years is 7.7 per cent per annum. Table 3.1.1 summarises the growth in student numbers in the MESDCs.

Table 3.1.1

Total student numbers MESDCs* (000s)

MESDCs	1997	1998	1999	2000	2001	2002	2003	Compound Growth (97–02)
USA	458	481	491	515	548	583	586	4.9%
UK	198	208	213	219	223	235	273	3.5%
Australia	49	54	59	70	82	97	115	14.5%
Canada	32	33	36	41	59	69	N/A	16.8%
NZ	6	6	6	7	10	15	N/A	21.4%
Total	**743**	**782**	**804**	**852**	**922**	**999**		**6.1%**

** Data for Canada for 2002 is based on IDP projections*

Table 3.1.2 clearly indicates the downward trends in global market shares for both the UK and USA. The UK suffered a 3.1 per cent loss in share from 1997 to 2002, even though actual numbers increased from 198,000 to 235,000 over this period. This contrasts with growths in global market shares of the other three MESDCs, albeit from a small base. The UK is estimated to have reversed this decline in global market share in 2003, but the final figure can only be calculated when confirmed data from all MESDCs becomes available

Table 3.1.2

Global market share MESDCs

MESDCs	1997	1998	1999	2000	2001	2002	Change 97–02
USA	61.7%	61.6%	61.1%	60.4%	59.4%	58.4%	–3.3%
UK	26.7%	26.6%	26.5%	25.7%	24.2%	23.6%	–3.1%
Australia	6.6%	6.9%	7.3%	8.2%	8.9%	9.7%	3.1%
Canada	4.3%	4.2%	4.4%	4.9%	6.4%	6.9%	2.6%
NZ	0.8%	0.7%	0.7%	0.8%	1.1%	1.5%	0.7%

3.2 Discrete choice modelling and market share

Introduction

The Global Forecasting Model assumes that the market share of a particular study destination is influenced by three major factors: historical performance, attractiveness of that study destination relative to its competitor countries and market maturity. The discrete choice model aims to understand the relationship between the historical performance, in terms of actual international student flows and students' perceptions of attractiveness of study destinations.

This section outlines the key findings resulting from the application of the discrete choice model in the Global Forecasting Model.

The discrete choice model elasticity set

The basic outputs of the discrete choice model, to which future performance for the primary attractiveness factors can be applied to determine market share, are called 'elasticities of demand'. These describe the impact of the attractiveness factors upon market share.

The elasticities are produced in the model for each of the five destination countries for each of the six primary attractiveness factors and 13 source regions included in the model. As outlined in chapter 2, the primary attractiveness factors are:

- quality of education
- employment prospects
- affordability
- personal security
- lifestyle
- education accessibility.

The analysis of the elasticities determines which primary attractiveness factors are the key drivers of growth within each source region, for each destination country. So, for the UK they describe how a change in the performance ratings for the primary attractiveness factors drives a percentage change in the UK's market share.

Table 3.2.1 provides the set of elasticities by region and by each of the factors for the UK. The elasticities refer to the percentage change in market share that will result from a 1 per cent change in the relevant attractiveness factor. For example, in South East Asia, the UK's performance is influenced strongly by the perceived quality of education and employment. A 1 per cent improvement in the relative performance of the UK in the quality of education would led to a 4.3 per cent increase in the UK's share of demand from the South East Asian market.

Table 3.2.1

Summary of UK's elasticities set

	Quality of education	Employment prospects	Affordability	Personal security	Lifestyle	Education accessibility
Sub-Saharan Africa	NS*	NS	0.08	NS	NS	5.55
North Africa	10.60	9.30	1.17	NS	NS	1.82
Middle East	6.33	0.93	0.04	0.11	NS	NS
East Asia	NS	5.76	0.31	NS	0.08	NS
South East Asia	4.30	0.90	0.24	NS	NS	NS
South Asia	NS	5.86	0.34	NS	NS	NS
Central Asia	4.03	3.83	0.48	NS	NS	NS
North America	5.89	3.74	0.35	NS	1.19	0.29
Central America	4.82	NS	0.18	1.40	9.19	NS
South America	2.53	10.93	1.11	NS	NS	NS
Western Europe	3.89	NS	0.75	NS	NS	0.15
Eastern Europe	3.07	7.52	0.59	NS	1.89	NS
Oceania	NS	15.09	0.08	8.62	1.35	9.16

**NS = not significant*

Key findings

The analysis of cross-elasticities of the primary attractiveness factors allows an indication of the decline in market share that competitor destinations would experience if the UK experienced a 1 per cent improvement in a particular characteristic. Table 3.2.2 provides the set of cross-elasticities by region for each of the factors.

For example, in North Africa, if the perceived quality of UK education improved by 1 per cent, the market share that the US, Canada, Australia and New Zealand have of North Africa international students would decline by 3.6 per cent in each.

Table 3.2.2

Cross-elasticities for the United Kingdom

	Quality of education	Employment prospects	Affordability	Personal security	Lifestyle	Education accessibility
Sub-Saharan Africa	NS*	NS	–0.03	NS	NS	–2.33
North Africa	–3.61	–3.17	–0.40	NS	NS	–0.62
Middle East	–1.81	–0.27	–0.01	–0.03	NS	NS
East Asia	NS	–0.94	–0.05	NS	–0.01	NS
South East Asia	–1.13	–0.24	–0.06	NS	NS	NS
South Asia	NS	–0.67	–0.04	NS	NS	NS
Central Asia	–0.92	–0.87	–0.11	NS	NS	NS
North America	–2.54	–1.61	–0.15	NS	–0.52	–0.12
Central America	–0.54	NS	–0.02	–0.16	–1.04	NS
South America	–0.21	–0.92	–0.09	NS	NS	NS
Western Europe	–5.66	NS	–1.10	NS	NS	–0.23
Eastern Europe	–0.59	–1.45	–0.11	NS	–0.36	NS
Oceania	NS	–3.87	–0.02	–2.21	–0.35	–2.35

Overall, the analysis of elasticities from the discrete choice model revealed the following:

- Quality and employment prospects are the two most influential attractiveness factors for all regions except sub-Saharan Africa, and to an extent both Central America and Oceania.
- For sub-Saharan Africa, the accessibility of an international student place is a key factor influencing choice.
- For most areas, affordability was a factor, albeit far less influential overall than quality and employment prospects.

The study clearly demonstrates the impact of the two factors that have emerged to be of overriding importance in all source countries and are forecast to be the most influential upon the UK's market share. These are:

- the perceived quality of the provision in the UK
- the future employment prospects associated with the UK qualification obtained.

The current relative lack of emphasis on affordability is probably due to the demand from international students generally continuing to exceed the supply of higher education places globally. This could change as countries accelerate their own local provision (either through domestic or transnational provision).

3.3 Forecasts of total global demand for international student places

Globally, it is estimated that over 2.1 million students are currently seeking an international higher education student place. This is regardless of their destination country and whether it is English-speaking or not. Indeed, there are thought to be significant flows between countries that are not English speaking – for example, Indian students to Russia, West Africans to France, and intra-European and intra-Asian mobility.

The Global Forecasting Model has facilitated the prediction of the total number of international students globally to 2020, using the method described in chapter 2.

The approach taken included consideration of predicted values of demographic, economic and education variables, as well as historical international education mobility data.

Overall, the model projects the total global demand for international student places to increase from about 2.1 million in 2003 to 3.3 million in 2010 and approximately 5.8 million in 2020. This implies a compound annual growth rate of 6.2 per cent.

The breakdown of these forecasts by source region is shown in Table 3.3.1.

Table 3.3.1

Forecasts of global and regional demand for all international student places (000s)

	2003	2005	2010	2015	2020	Growth*
Africa	**225**	**250**	**321**	**409**	**525**	**5.1%**
Sub-Saharan	140	156	203	267	355	5.6%
North Africa	84	94	118	142	171	4.1%
Middle East	133	147	185	233	291	4.7%
Asia	**963**	**1,142**	**1,806**	**2,674**	**3,815**	**8.5%**
East Asia	578	693	1,089	1,666	2,485	9.0%
South East Asia	170	186	266	373	489	6.7%
South Asia	154	192	358	517	696	9.3%
Central Asian Republics	62	71	94	119	145	5.1%
Americas	**172**	**182**	**212**	**247**	**285**	**3.1%**
North	87	90	101	112	125	2.2%
Central	27	29	37	47	57	4.7%
South	58	63	74	88	103	3.4%
Europe	**610**	**640**	**724**	**808**	**885**	**2.2%**
West	385	397	430	458	482	1.3%
East	225	243	293	350	403	3.5%
Oceania	**10**	**10**	**11**	**13**	**14**	**2.1%**
World	**2,113**	**2,371**	**3,260**	**4,384**	**5,815**	**6.2%**

** Compound annual growth*

3.4 Forecasts of total demand for international student places in MESDCs

Global demand for international student places in the five major English-speaking destination countries is forecast to increase from about 1 million places in 2003 to 2.6 million places in 2020. This represents an annual growth rate of 6.0 per cent. The market share of the five MESDCs as a fraction of the total global demand for all international students is forecast to decrease slightly from 47 per cent in 2003 to 45 per cent in 2020. By 2020, Asia is forecast to dominate the demand for major English-speaking destination countries, representing almost 1.9 million places or 71 per cent of the global demand for the five major English-speaking destination countries, compared to the current level of approximately 53 per cent and 63 per cent in 2010. In contrast, Europe is forecast to account for 12 per cent of global demand in 2020, compared to 23 per cent in 2003 and 17 per cent in 2010.

The forecasts of international student numbers in major English-speaking destination countries are shown in Table 3.4.1.

Table 3.4.1

Forecasts of global and regional demand for international student places in all MESDCs (000s)

	2003	2005	2010	2015	2020	Growth*
Africa	**63**	**67**	**87**	**113**	**146**	**5.2%**
Sub-Saharan	53	56	74	96	126	5.4%
North Africa	10	11	14	17	20	4.1%
Middle East	37	39	49	60	73	4.2%
Asia	**528**	**612**	**943**	**1,347**	**1,862**	**7.8%**
East Asia	299	343	498	719	1,026	7.6%
South East Asia	105	114	158	216	281	6.2%
South Asia	121	152	283	407	549	9.3%
Central Asian Republics	3	3	4	6	7	5.3%
Americas	**127**	**134**	**156**	**181**	**209**	**3.0%**
North	69	71	80	90	100	2.3%
Central	20	22	27	34	41	4.5%
South	38	41	48	57	67	3.3%
Europe	**226**	**235**	**262**	**289**	**313**	**2.0%**
West	168	173	187	198	208	1.3%
East	58	62	75	90	104	3.6%
Oceania	**8**	**8**	**9**	**10**	**11**	**2.2%**
World	**988**	**1,096**	**1,507**	**2,000**	**2,614**	**6.0%**

** Compound annual growth 2003–2020*

The rest of this chapter deals specifically with forecasts of students travelling to study in the UK. This is a subset of all those international students in major English-speaking destination countries.

3.5 Base scenario for the UK

Under the conditions of this scenario, the UK's performance for each of the primary attractiveness factors is assumed to be constant at 2003 levels over the forecast period. The projected future demand for international higher education student places from each source country is forecast to change solely based on income growth, demographic changes and higher education participation rate growth (see section 2.3.1).

For the base scenario, an increase from the current 237,800 international students in the UK to 510,800 by 2020 is predicted. However, at the same time the UK's market share is forecast to fall to 19.5 per cent,from the current estimated 24.1 per cent. The compound annual growth rate of 4.7 per cent for the UK compares to an overall growth rate of 6.0 per cent predicted for the total numbers of international higher education students in all MESDCs.

The diminishing market share can also be explained in another way. In the base scenario, the growth in the number of international students varies by origin country. This arises because of different projected incomes (which affect the higher education participation rates) as well as differences in population growth (which affects the numbers of students). An implication of this is that, despite the market shares for each MESDCs in individual source countries remaining fixed, the global market share of a MEDSC (i.e. the total share of international students from all destinations) can vary. For example, if an MESDC has a relatively high share in a relatively rapidly growing source market, then that MEDSC will experience an increase in its aggregate market share, *ceteris paribus*. In the case of the UK, the base projections show a decline in aggregate market share. This arises because the UK has a relatively high share in the less rapidly growing destinations.

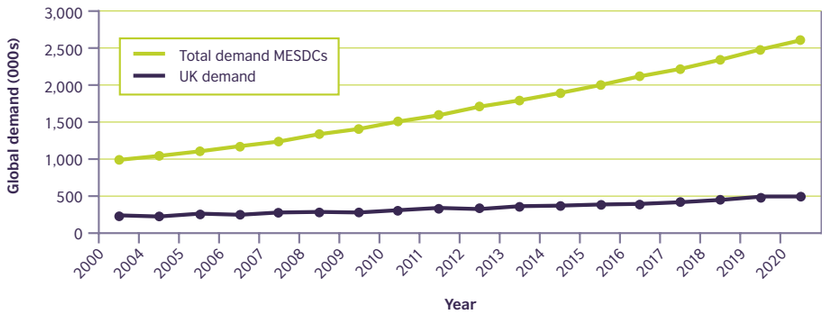
Non-European students in the UK

- In 2003, there are forecast to be 127,000 non-European international students in UK higher education.
- This figure is forecast to grow by 6.5 per cent annually to almost 200,000 students in 2010 and 365,000 students by 2020, or 71 per cent of all international students in the UK.

Figure 3.5.1 summarises the evolution of the future demand forecasts for international student places in the UK compared to the five MESDCs.

Figure 3.5.1

Forecasts of global demand for international student places in the UK and total MESDCs
Base scenario



Growth drivers by region

- Europe is currently the leading source region for international student places in higher education in the UK, representing some 47 per cent of the total global demand for the UK in 2003, compared to 23 per cent overall in all MESDCs. This is forecast to decrease to 39 per cent in 2010 and 29 per cent in 2020, however actual numbers are forecast to grow by 1.5 per cent annually to 127,000 in 2010 and 146,000 in 2020.
- Asia is expected to become the leading source region by 2010 (40 per cent of global total) and is forecast to account for over half of the global demand for the UK by 2020.
- Asia's growth is mainly driven by the increasing demand from South and East Asia. East Asia is anticipated to become the leading source sub-region for the UK by the end of the forecast period, representing over 30 per cent of the global demand, growing from 43,000 students in 2003 to 75,000 in 2010 and over 160,000 in 2020. This is a compound annual growth rate of 8.3 per cent.
- Demand from South Asia is forecast to increase from 12,000 in 2003 to 27,000 in 2010 and almost 53,000 in 2020, with a compound annual growth rate of 9.1 per cent.
- Sub-Saharan Africa and South East Asia are the only other regions forecast to experience a compound annual growth rate of over 5 per cent.

Table 3.5.1 summarises the forecasts for each source region for the UK's international student places.

Table 3.5.1

Forecasts of global and regional demand for international student places in the UK ('000s)
Base scenario

	2003	2005	2010	2015	2020	Growth*
Africa	**19**	**20**	**26**	**34**	**44**	**5.3%**
Sub-Saharan	16	17	23	30	39	5.5%
North Africa	3	3	3	4	5	3.9%
Middle East	10	10	13	16	20	4.4%
Asia	**74**	**85**	**130**	**188**	**266**	**7.9%**
East Asia	43	50	75	112	164	8.3%
South East Asia	19	20	27	37	48	5.9%
South Asia	12	15	27	38	53	9.1%
Central Asian Republics	1	1	1	1	1	4.9%
Americas	**23**	**23**	**26**	**30**	**33**	**2.3%**
North	18	18	20	22	24	1.9%
Central	2	2	2	3	3	4.2%
South	3	3	4	4	5	3.3%
Europe	**111**	**115**	**127**	**137**	**146**	**1.6%**
West	99	103	112	119	125	1.4%
East	12	13	15	18	20	3.3%
Oceania	**2**	**2**	**2**	**2**	**3**	**2.0%**
World	**238**	**256**	**325**	**407**	**511**	**4.7%**

** Compound annual growth 2003–2020*

Main source countries for international students

The following summarises the forecasts of demand for international student places in the UK at the country level under the base scenario conditions:

- In 2003, four out of the top ten countries with the highest demand for international student places in the United Kingdom are Asian, namely China, Malaysia, Hong Kong and India.
- By 2020, these same countries plus Pakistan will have assumed increasing importance in the top ten. By 2010, China is forecast to be the leading source country and by 2020 could account for over 130,000 international students studying in the UK. India is predicted to become the third largest source country by 2010, moving up from tenth in 2003. Demand from India could grow to almost 30,000 students by 2020.
- Most European countries in the top ten during the forecast period are predicted to grow by less than 2 per cent annually.
- There is forecast to be less diversity, as the top ten countries in 2020 account for some 61 per cent of the UK's total international students, compared to 55 per cent in 2003.

Other main features include the following:

- almost 15,000 Malaysian students in 2010 and almost 29,500 in 2020, growing at 7 per cent annually
- almost 5,000 Pakistani students in 2010 and over 11,000 in 2020, growing at almost 10 per cent annually
- almost 17,000 students from the US and over 14,000 from Hong Kong by 2020, albeit growing at slower rates than the countries mentioned above
- 146,000 international students from Europe, including almost 35,000 from Greece, by 2020.

Table 3.5.2 indicates the top ten countries over the period 2003 to 2020.

Table 3.5.2

Forecasts of demand for international student places in the UK (000s)
Top ten source countries – base scenario

Top ten 2003	2003	2005	2010	2015	2020	Growth*
Greece	27	28	31	33	35	1.5%
China	20	27	49	82	131	11.4%
Germany	13	13	14	15	16	1.2%
USA	13	13	14	15	17	1.6%
France	12	12	13	14	15	1.2%
Ireland	12	13	15	17	18	2.4%
Malaysia	10	10	15	21	28	7.0%
Hong Kong	9	9	11	12	14	2.9%
Spain	7	8	8	8	9	1.1%
India	7	9	17	23	30	9.1%
Top ten 2020						
China	20	27	49	82	131	11.4%
Greece	27	28	31	33	35	1.5%
India	7	9	17	23	30	9.1%
Malaysia	10	10	15	21	28	7.0%
Ireland	12	13	15	17	18	2.4%
USA	13	13	14	15	17	1.6%
Germany	13	13	14	15	16	1.2%
France	12	12	13	14	15	1.2%
Hong Kong	9	9	11	12	14	2.9%
Pakistan	2	3	5	7	11	9.4%

** Compound annual growth 2003–2020*

3.6 Optimistic scenario for the UK

The 'optimistic' scenario represents the position where the UK is able to succeed in improving its performance for all its attractiveness attributes relative to its main competitors. Under these conditions the UK market share of the MESDCs is forecast to increase strongly from the current 24 per cent to 27 per cent in 2010 and 33 per cent by 2020. In absolute number terms, this represents an increase from 240,000 international students in 2003 to just over 400,000 in 2010 and almost 870,000 in 2020.

The projected annual growth is 8.1 per cent, compared to 6.0 per cent for the total number of international higher education students in all MESDCs. It is also significantly higher than the 4.7 per cent predicted under the base scenario conditions.

Non-European students in the UK

In 2003, there are forecast to be 129,000 non-European international students in UK higher education. This is projected to grow by 10.2 per cent annually to almost 275,000 students in 2010 and 672,000 students by 2020, or 77 per cent of all international students in the UK. Overall, the numbers are predicted to be 39 per cent higher than the base scenario in 2010 and 84 per cent higher than the base scenario in 2020.

Table 3.6.1 highlights the trends of future demand for international student places in the UK under the conditions of the optimistic scenario. It clearly illustrates what the UK could achieve in all regions if the correct strategies are adopted.

Table 3.6.1

Forecasts of global and regional demand for international student places in the UK (000s)
Optimistic scenario

	2003	2005	2010	2015	2020	Growth*
Africa	**19**	**22**	**36**	**56**	**85**	**9.4%**
Sub-Saharan	16	18	30	46	69	9.1%
North Africa	3	3	6	10	15	10.8%
Middle East	10	11	17	23	31	7.2%
Asia	**76**	**91**	**175**	**287**	**467**	**11.4%**
East Asia	43	52	98	166	282	11.8%
South East Asia	19	21	34	50	73	8.5%
South Asia	14	18	41	69	110	12.9%
Central Asian Republics	1	1	1	2	3	9.8%
Americas	**23**	**26**	**43**	**57**	**79**	**7.3%**
North	18	20	32	40	51	6.0%
Central	2	2	3	4	5	6.7%
South	3	4	8	13	22	12.5%
Europe	**111**	**119**	**132**	**172**	**198**	**3.9%**
West	99	105	113	143	158	3.2%
East	12	14	19	29	40	7.6%
Oceania	**2**	**2**	**5**	**7**	**10**	**9.1%**
World	**240**	**271**	**407**	**603**	**869**	**8.1%**

** Compound annual growth 2003–2020*

Growth drivers by region

- Asia's share of global demand for UK higher education places is expected to increase from 32 per cent in 2003 to 43 per cent in 2010 and 54 per cent by 2020, mainly driven by growth in demand of over 10 per cent annually from East and South Asia.
- Conversely, Europe's relative proportion of places in UK education is forecast to decrease from 47 per cent in 2003 to 32 per cent in 2010 and 23 per cent in 2020 – although still increasing in terms of actual numbers of international student places.
- Outside Asia, strong annual growth is forecast in South America (12.5 per cent) and North Africa (10.9 per cent).

Main source countries for international students

- Similar to the base scenario, by 2020 five of the ten countries with the forecasted highest demand for the UK are Asian. China (15 per cent annual growth over the forecast period), India (13 per cent) and Malaysia are projected to be the three countries leading the growth in demand. Demand from Pakistan also grows by 14 per cent per annum to become the eighth largest source country for the UK.
- By 2010, there are forecast to be over 64,000 students in the UK from China and over 26,000 from India. These numbers grow to 225,000 and 66,000 by 2020 respectively.
- Greece, France, Germany and Ireland all decrease in their rank among the leading source countries and Spain drops out of the top ten altogether. Table 3.6.2 summarises the leading ten countries for the period considered.
- Strong growth of greater than 10 per cent per annum is predicted in a number of other countries including Mexico, Bangladesh, Sri Lanka, Brazil, Egypt, Uganda, Tanzania and Indonesia.

Table 3.6.2

Forecasts of demand for international student places in the UK (000s)
Top ten source countries – optimistic scenario

Top ten 2003	2003	2005	2010	2015	2020	Growth*
Greece	27	28	31	35	37	1.8%
China	20	28	64	122	225	14.2%
Germany	13	14	15	20	22	3.3%
USA	13	14	19	22	25	3.2%
France	12	13	13	19	22	3.7%
Ireland	12	13	15	17	19	2.5%
Malaysia	10	10	18	28	41	9.0%
Hong Kong	9	9	13	17	21	5.2%
India	8	11	26	43	66	11.7%
Spain	7	8	8	10	12	2.8%
In 2020						
China	20	28	64	122	225	15.0%
India	8	11	26	43	66	13.1%
Malaysia	10	1	18	28	41	9.3%
Greece	27	28	31	35	37	2.0%
United States	13	14	19	22	25	3.6%
Germany	13	14	15	20	22	3.9%
France	12	13	13	19	22	4.1%
Pakistan	3	3	7	12	22	12.6%
Hong Kong	9	9	13	17	21	5.4%
Ireland	12	13	15	17	19	2.8%

** Compound annual growth 2003–2020*

Summary of results – base and optimistic scenarios

The two following tables show that, due to a higher annual growth rate (8.1 per cent compared to 4.7 per cent), the optimistic scenario is forecast to realise 25 per cent more international students in the UK in 2010 and 70 per cent more in 2020 than on the base scenario. The differences between the scenarios are even more pronounced when only non-European students are considered.

Expressed in another telling way, under the optimistic scenario the UK's market share of non-European students in the main English-speaking destination countries would be almost double the same share as under the base scenario (29 per cent compared to 16 per cent) by 2020.

Table 3.6.3

Forecasts of global and regional demand for student places in the UK (000s)
Base and optimistic scenarios

Global	2003	2005	2010	2015	2020	Growth*
Base scenario	238	256	325	407	511	4.7%
Optimistic scenario	240	271	407	603	869	8.1%
European source countries						
Base scenario	111	115	127	137	146	1.6%
Optimistic scenario	111	119	132	172	198	3.9%
Non-European source countries						
Base scenario	127	141	198	270	365	6.5%
Optimistic scenario	129	152	275	430	672	10.2%

** Compound annual growth 2003–2020*

In addition, the forecast market shares for the UK as a proportion of all forecast international student places in all MESDCs are shown for the same scenarios in Table 3.6.4.

Table 3.6.4

Forecasts of UK market share of international student places in all MESDCs
Base and optimistic scenarios

Global	2003	2005	2010	2015	2020
Base scenario	24%	23%	22%	20%	20%
Optimistic scenario	24%	25%	27%	30%	33%
European source countries					
Base scenario	49%	49%	48%	47%	47%
Optimistic scenario	49%	51%	50%	60%	63%
Non-European source countries					
Base scenario	17%	16%	16%	16%	16%
Optimistic scenario	17%	18%	22%	25%	29%

3.7 Pessimistic scenario for the UK

This scenario represents the situation in which all the main factors worsen for the UK. Under these conditions, it is forecast that by 2020 the UK's market share across MESDCs could fall from 24 per cent in 2003 to 13 per cent in 2010 and just under 10 per cent in 2020. In number terms there is projected to be an initial decrease of 2.8 per cent per annum to just under 160,000 students by 2010, followed by an increase to 253,948 students in 2020.

These changes over time assume that the negative factors contributing to the forecast scenario occur early in the forecast period. However, they could occur at any time, and the point is to highlight what the general effect might be over a longer period.

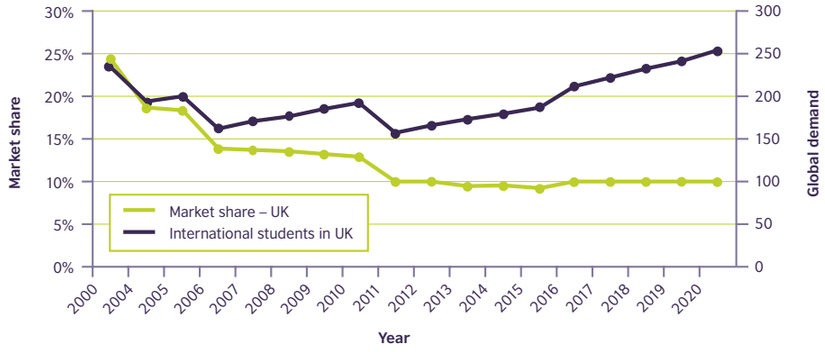
Non-European students in the UK

For the pessimistic scenario, the number of non-European students in the UK is forecast to grow by 2.9 per cent annually to 163,000 students in 2020, or 64 per cent of all international students in the UK. This is despite an initial drop in forecast demand until 2010.

Figure 3.7.1 highlights the trends of future demand for international student places in the UK compared to total international students going to the MESDCs, under the pessimistic scenario conditions.

Figure 3.7.1

Forecasts of UK market share of international student places in all MESDCs and forecasts of global demand for international student places in the UK (000s) – pessimistic scenario



Change drivers by region

Asia's share of total global demand is forecast to increase from 31 per cent in 2003 to 42 per cent in 2010 (despite actual negative growth in this early half of the forecast period) and 53 per cent in 2020. These are similar proportions to the base scenario.

- Although all the non-Asian regions decline in the first half of the forecast period, Europe does not suffer as much as Africa and the Americas. Its market share actually remains stable at close to half of all international students globally until 2012, when growth across Asia is forecast to begin again.
- Diversity by source region is affected in the pessimistic scenario as African and American markets are predicted to experience rapid decline in the first half of the forecast period. However, they are forecast to begin recovery by 2020.

Main source countries for international students

- The top ten countries in 2003 are also predicted to be the top ten countries in 2020, although China and Malaysia with their forecast higher growth rates become relatively more important. Even under the conditions of this scenario, there are still likely to be 34,000 Chinese students in the UK in 2010, growing to 72,000 by 2020.
- The US and India have much lower growth rates under pessimistic scenario conditions, compared to other scenarios. In particular, India is no longer predicted to be one of the very large markets, although growth for India should pick up in the second half of the forecast period. The probable reason for this is that it is a market in which the inter-relationship between the key factors of quality, employability and affordability are the key determinants.

3.8 Price escalation scenario for the UK

Under the conditions of the price escalation scenario, the UK's market share of all international student places in the MESDCs is forecast to increase to close to 36 per cent for the first half of the period (over the time the price escalation takes effect) before decreasing to 28 per cent by 2020. In number terms this represents an increase from 238,000 in 2003 to just over 525,000 in 2010 and then to about 735,000 in 2020. Growth is highest in the initial part of the forecast period.

The initial increase in the UK's market share can be explained by the fact that price is frequently viewed as a proxy for quality in those countries where there might be a lack of good information on the quality of study opportunities. Hence where quality and employability are very important decision-making choice factors, relative to affordability, the UK market share may increase in response to a price change – as has been forecast here. One would logically expect that there might be an upper limit to the price increase that the market could bear before it responds negatively; however, this model is not yet able to provide that information.

This phenomenon is unlikely to happen in Europe to the same extent for a number of reasons, including the proposed increase of UK domestic student fees (possibly in 2006), which could have an initial deterrent effect for students from current EU member states. The perception of quality and employability is a less significant factor in their choice of destination country.

Non-European students in the UK

The number of non-European students in the UK is forecast to increase significantly, over the initial period, due to the 'enhanced quality perception' effect. It should then grow steadily although more slowly over the forecast period, to 376,000 students in 2010 and 583,000 in 2020. In contrast, the growth in European students is predicted to be relatively slower at about 1.2 per cent per annum.

The proportion of non-European students in the total UK international student population is forecast to be higher in 2020, at 79 per cent, than for any other scenario. This would seem to reflect that those markets are driven more by quality and employability considerations than affordability.

Growth drivers

East and South Asia, and to a lesser extent sub-Saharan Africa, are forecast to be the key regions driving growth in demand for the UK higher education places under the conditions of this scenario. The proportion of students from Asia is forecast to increase from 31 per cent in 2003 to 50 per cent in 2010 and 61 per cent in 2020. The respective forecast proportions from Europe are 47 per cent, 28 per cent and 21 per cent.

Table 3.8.1

Forecasts of global and regional demand for international student places in the UK (000s) – price escalation scenario

	2003	2005	2010	2015	2020	Growth*
Africa	**19**	**21**	**29**	**36**	**46**	**5.2%**
Sub-Saharan	16	16	22	29	38	5.6%
North Africa	3	5	7	8	8	3.7%
Middle East	10	20	25	28	30	3.9%
Asia	**74**	**167**	**264**	**347**	**449**	**7.9%**
East Asia	43	104	160	216	289	8.2%
South East Asia	19	30	42	52	62	5.4%
South Asia	12	32	59	77	95	9.1%
Central Asian Republics	1	2	2	2	2	4.8%
Americas	**23**	**46**	**53**	**53**	**53**	**1.9%**
North	18	38	43	43	42	1.7%
Central	2	3	4	4	4	3.7%
South	3	4	6	6	6	2.6%
Europe	**111**	**131**	**150**	**152**	**153**	**1.2%**
West	99	107	120	122	123	0.9%
East	12	24	30	30	30	2.4%
Oceania	**2**	**5**	**6**	**6**	**5**	**1.7%**
World	**238**	**390**	**526**	**623**	**736**	**4.8%**

** Compound annual growth 2003–2020*

Main source countries for international students

This scenario also sees the growing importance of Asia as the main source region. China, India and Malaysia are forecast to become the leading three source countries for the UK by 2020.

Significantly more so than under the other scenario conditions, the importance of Europe diminishes. The leading source country from Europe, Greece, is forecast to drop to the fourth largest country globally by 2020.

The implications of the forecasts under this scenario is that, although some sustained growth might be achieved in terms of total student demand, it will occur at the expense of a more diversified student base – in terms of country of origin of international students.

3.9 European Union impact scenario

Europe, the EU and enlargement

The European Union impact scenario only affects European source countries. The results discussed here report on all European countries, regardless of whether they are in the EU or not. In any case, many of those European countries that are not currently in the EU are expected to be member states by 2008, well within the forecast period for this study.

All non-European countries are treated the same way as in the base scenario – that is, no change in performance for primary attractiveness factors is assumed.

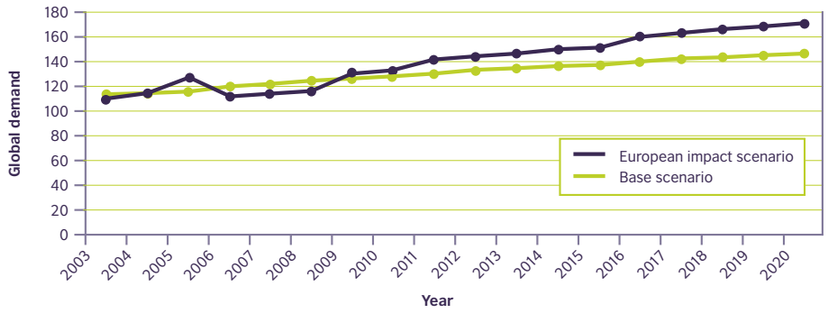
Europe does provide many opportunities for the UK. Currently some 40 per cent of non-UK students studying in UK higher education are from EU states and some 47 per cent are from across all European states. In numerical terms, the latter total is projected to grow to about 170,000 by 2020 from the current 112,000 (see Figure 3.9.2).

Under the conditions of this scenario, the UK's forecast share of all European students who study internationally, including those who travel to English and non-English speaking destinations, is forecast to increase from 18.2 per cent in 2003 to 19.2 per cent in 2020. In addition, the UK has about 50 per cent of the total of all European students studying in the MESDCs. The implied annual growth rate under this scenario is 2.8 per cent, which is slightly higher than the growth rate when all European international students are taken into account, regardless of destination. This indicates that the UK is forecast to continue to perform better than other MESDCs in attracting European students.

Figure 3.9.1 highlights trends in future demand for international student places in the UK compared to the forecasts of the base scenario.

Figure 3.9.1

Forecasts of global demand for international student places in the UK (000s)
Base scenario compared to European impact scenario



Growth drivers by region

- Although most of the demand is forecast to come from Western European countries (around 118,000 students in 2020), the annual growth to 2020 from Eastern European countries is anticipated to be significantly higher than for Western Europe (6.6 per cent compared to 1.4 per cent).
- Western Europe is predicted to experience an initial small decline after 2006 but then to recover. Eastern Europe continues to grow over the entire forecast period.

Figure 3.9.2 indicates the increasing importance of demand from Eastern Europe as a proportion of the total demand from Europe.

Figure 3.9.2

Composition of European demand for international student places in the UK
European impact scenario

Main source countries for international students from Europe

- Turkey, Romania and Poland are forecast to have the highest annual growth rates in Europe by 2020 (15.4 per cent, 18.6 per cent and 7.5 per cent respectively) and are forecast to be amongst the ten leading source countries from Europe. In contrast, the growth rates from Western European countries are small and even negative during some parts of the forecast period.

Table 3.9.1 summarises demand from the ten countries with highest demand from Europe in 2003 and in 2020, as well as total European demand and global demand for this scenario.

Table 3.9.1

Forecasts of global and regional demand for international student places in the UK (000s) including top ten European countries – European impact scenario

Top ten 2003	2003	2005	2010	2015	2020	Growth*
Greece	27	28	29	32	34	1.5%
Germany	13	13	11	13	14	1.8%
France	12	12	10	12	13	2.0%
Ireland	12	13	14	16	18	2.2%
Spain	7	8	7	7	8	1.7%
Italy	6	6	5	6	6	1.4%
Cyprus	4	6	7	8	9	3.1%
Sweden	4	4	3	3	4	1.8%
Norway	4	4	3	3	4	2.0%
Belgium	2	2	2	2	3	1.4%
In 2020						
Greece	27	28	29	32	34	1.5%
Ireland	12	13	14	16	18	2.4%
Germany	13	13	11	13	14	1.2%
France	12	12	10	12	13	1.2%
Turkey	2	2	7	9	12	15.4%
Cyprus	4	6	7	8	9	4.0%
Spain	7	8	7	7	8	1.1%
Italy	6	6	5	6	6	0.8%
Romania	1	1	4	5	6	18.6%
Poland	1	3	4	5	5	7.5%
Total Europe	**111**	**124**	**131**	**151**	**170**	**2.7%**
Western Europe	99	103	96	107	118	1.7%
Eastern Europe	12	22	36	44	51	6.6%
World	**238**	**265**	**329**	**421**	**535**	**5.0%**

** Compound annual growth 2003–2020*

Affordability of UK higher education for EU students: The model also indicates a small drop in demand from EU member states from 2006. This is directly related to the proposed fee increases for UK undergraduate programmes, currently suggested to be up to a maximum of £3,000 per annum. The reason for the impact is the likely perceived extra cost associated with UK higher education (i.e. a negative impact on the affordability factor). However, this impact will probably be short-lived, given that EU students will also be entitled to the same fee deferment as domestic students. This is essentially a loan to meet the fees and will be repayable only when the student has achieved a target salary in their subsequent employment.

A major attraction for many EU students is the enhanced employability associated with an internationally recognised qualification from the UK where the English language has been used as the medium for teaching and assessment. What might EU students be willing to pay for this – over and above the costs of education in their own country? The UK currently offers courses of relatively shorter duration but changes brought about by the Bologna process could have an impact on this.

Revenue: European students on self-financing taught postgraduate programmes pay full-cost fees for their studies, although on all publicly funded courses EU students pay fees at the same rate as UK domestic students. While in the UK, students from EU member states probably contribute over £460 million per annum to the UK economy through their fee payments and living expenditure. The latter has been assessed in 2001–02 as totalling £295 million per annum and fee expenditure was estimated at a further £168 million per annum.

European competitors: An additional factor is the growth of English medium higher education programmes now offered in a number of EU countries – e.g. France, Germany, Netherlands, Sweden. Many have been developed to attract a mix of students from different countries, particularly non-EU, either to generate revenue or to meet foreign policy objectives. Over what period of time will these programmes be financially and academically attractive to other EU students?

EU Accession States

There has been recent significant growth in students from the 'accession states' (see section 2.3) entering UK higher education. HESA data15 indicated that students studying in the UK from many of these states had increased by over 20 per cent in the year from 2001–02 to 2002–03. These are currently full fee-paying international students. With the accession of ten states in May 2004, numbers are likely to grow even more rapidly.

Table 3.9.3 shows the forecasts only for the known and predicted accession states to the EU. Of these, Bulgaria and Romania are included from 2008 and it is assumed, in this scenario, that Turkey will join at the same time.

Forecast demand from the accession states is set to double between 2003 and 2005 and more than triple between 2003 and 2010. Most of the 2004 accession states are forecast to see a sudden large increase in the number of students heading to the UK in 2005. However, over the whole of the forecast period, the largest growth is likely to come from the 2008 accession states, namely Romania, Bulgaria and Turkey (when the last does eventually join.

Table 3.9.2

Forecasts of demand for international student places in the UK (to nearest 100)
EU accession countries – European impact scenario

	2003	2005	2010	2015	2020	Growth*
Turkey	1,700	1,700	6,900	9,300	11,700	15.4%
Cyprus	3,900	6,100	6,900	8,000	9,100	4.0%
Romania	500	600	3,800	4,800	5,700	18.6%
Poland	800	3,300	3,900	4,600	5,100	7.5%
Bulgaria	400	500	3,100	3,700	4,200	17.8%
Czech Republic	400	1,700	2,100	2,500	2,900	8.3%
Hungary	400	1,700	2,200	2,600	2,900	8.1%
Slovakia	100	700	900	1,100	1,300	9.1%
Lithuania	100	700	800	900	1,100	8.7%
Latvia	100	600	700	900	1,000	8.3%
Malta	400	500	600	700	700	2.7%
Slovenia	200	500	600	600	700	6.0%
Estonia	100	400	500	600	600	7.3%
Total	**9,200**	**18,900**	**33,100**	**40,300**	**47,200**	**9.0%**

** Compound annual growth 2003–2020*

[15] *Higher Education Statistics Agency (HESA), UK, 2003, Students in UK Higher Education Institutions 2002/3, HESA [Customised data file].*

3.10 UK transnational education forecasts

It should be emphasised that, as was described in chapter 2, the base data available for forecasting transnational education growth is very limited at present. Any consideration of the analyses set out below should take this into account.

Employing the methodology to forecast UK transnational education described previously, demand is expected to grow very considerably: from an estimated 190,000 in 2003 to almost 350,000 in 2010 and then to 800,000 by 2020. This represents an annual growth rate of just over 9 per cent. This is significantly greater than the growth for the base scenario forecasts for international students onshore in the UK, which is expected to be about 4.7 per cent per annum. Therefore by 2010, the number of UK transnational education students is predicted to be 6 per cent higher than the number of onshore international students in the UK and 57 per cent higher in 2020 (see Figure 3.10.1).

Growth drivers by region and country for UK transnational education

The forecasts are presented in Tables 3.10.1 and 3.10.2; however, some key features are the following:

- In 2003, Asia represents some 62 per cent of the total global demand, or 117,000 students, for UK transnational education. The second largest source region is Europe with 26 per cent or about 50,000 students.
- By 2020, a majority of the global demand is forecast to come from Asia (639,000, or 79 per cent of total global demand) compared to the next largest source region, Europe (107,000 or 13 per cent of demand).
- Within Asia, an approximately even three-way split is predicted for 2020 between East Asia (221,000 or 34 per cent of Asian demand), South East Asia (223,000 or 35 per cent) and South Asia (195,000 or 31 per cent).
- Growth rates are forecast to be highest from South and East Asia, especially China and India.
- Five Asian countries – China, India, Malaysia, Hong Kong and Singapore – account for 58 per cent of the global demand (110,000 students) in 2003 and this is forecast to increase to 75 per cent of the demand in 2020 (598,000).
- In 2020, 94 per cent of the total Asian demand is forecast to come from five countries: China (176,000, or 27 per cent of total demand from Asia), India (167,000, or 26 per cent), Malaysia (152,000, or 23 per cent), Singapore (62,000, or 10 per cent), and Hong Kong (41,000, or 6 per cent).
- Outside the 'big 5' markets in Asia, Russia is predicted to grow strongly, with Pakistan and Sri Lanka also occupying top 10 market places by 2020 and both showing strong compound annual growth of 13 per cent and 11 per cent respectively.
- Africa (in particular sub-Saharan Africa) is predicted to grow significantly, although from a much smaller base, to 23,000 in 2020.

Table 3.10.1

Forecasts of global and regional demand for UK transnational higher education student places (000s)

	2003	2005	2010	2015	2020	Growth*
Africa	**6**	**7**	**10**	**16**	**25**	**8.4%**
Sub-Saharan	6	6	10	15	23	8.7%
North Africa	1	1	1	1	1	5.0%
Middle East	8	8	10	13	16	4.6%
Asia	**117**	**134**	**241**	**394**	**639**	**10.8%**
East Asia	33	39	66	119	221	12.0%
SE Asia	68	72	106	155	223	7.6%
South Asia	16	23	69	121	195	15.8%
Central Asia	0	0	0	0	0	9.6%
Americas	**8**	**9**	**12**	**14**	**17**	**4.5%**
North	5	5	5	6	7	2.6%
Central	3	4	5	7	9	6.5%
South	0	0	1	1	1	5.0%
Europe	**50**	**56**	**71**	**88**	**107**	**4.6%**
West	29	31	36	40	45	2.6%
East	21	25	36	48	62	6.5%
Oceania	**0**	**0**	**1**	**1**	**1**	**3.3%**
World	**189**	**214**	**345**	**525**	**804**	**9.1%**

** Compound annual growth 2003–2020*

Table 3.10.2

Forecasts of demand for UK transnational higher education student places (000s)
Top ten source countries

Top ten 2003	2003	2005	2010	2015	2020	Growth*
Singapore	37	38	47	55	62	3.3%
Malaysia	30	32	56	94	152	10.7%
Hong Kong	21	22	28	34	41	4.0%
India	13	19	61	105	167	16.2%
Russia	12	14	19	25	33	6.1%
China	9	14	35	81	176	18.7%
Greece	6	6	8	9	10	3.3%
Israel	4	4	5	6	7	3.2%
USA	4	4	5	5	6	2.4%
Germany	4	4	4	5	5	2.2%
In 2020						
China	9	14	35	81	176	18.7%
India	13	19	61	105	167	16.2%
Malaysia	30	32	56	94	152	10.7%
Singapore	37	38	47	55	62	3.3%
Hong Kong	21	22	28	34	41	4.0%
Russia	12	14	19	25	33	6.1%
Romania	3	4	7	10	13	8.0%
Greece	6	6	8	9	10	3.3%
Pakistan	1	1	3	6	10	13.5%
Sri Lanka	2	2	3	5	9	11.3%

** Compound annual growth 2003–2020*

Forecasting transnational education demand by level of study

An analysis of projected demand by level of study was undertaken. The results are summarised in Table 3.10.3. It is forecast that, by 2020, postgraduate demand could represent 60 per cent of the total demand in five key markets. This is in line with predictions for international students in the UK. It indicates that the global total split would remain roughly constant at 60 per cent postgraduate, 40 per cent undergraduate.

Table 3.10.3

Forecasts of global and country demand for UK transnational higher education (000s) by broad level of study

	2003		2005		2010		2015		2020	
	PG	UG	PG	UG	PG	UG	PG	UG	PG	UG
China	6	4	8	6	21	14	49	33	106	70
India	7	6	11	9	34	27	60	45	97	70
Malaysia	8	22	10	22	22	34	43	51	81	114
Singapore	28	9	29	9	36	11	42	13	47	29
Hong Kong	14	5	14	5	18	7	22	8	26	10
World	113	76	128	86	207	138	315	210	482	322

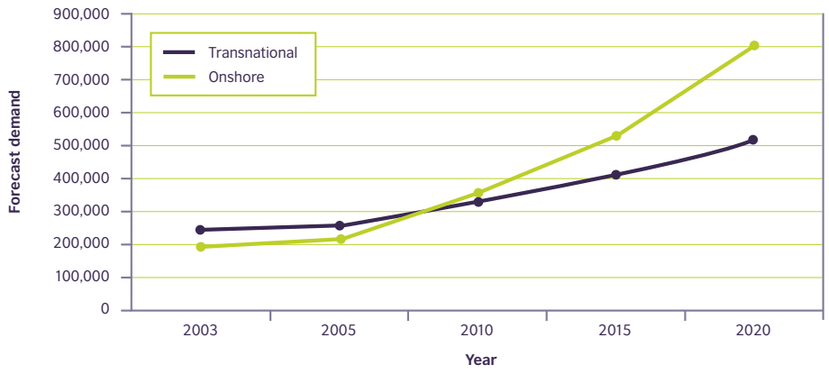
Why the rapid increase in demand for transnational education?

Figure 3.10.1 illustrates the projections of transnational demand over the forecast period. Transnational education delivery, which includes tuition to students at an offshore campus as well as delivered by distance and other means, is predicted to overtake international education delivered in the UK to become the largest mode of delivery for UK international student places between 2005 and 2010. A main reason for this is the large unsatisifed demand for higher education places in some of the key Asian countries (e.g. China, India, Hong Kong, Malaysia). This is both at the undergraduate and postgraduate levels. The increasing requirement for higher and professional qualifications, of international repute, by mid-career professionals and others not able to travel overseas for their study, is probably driving demand for postgraduate level transnational education. It is these countries that are the main demand drivers for UK transnational education globally.

The higher demand levels from Asia are also a result of the greater relative income growth rates in compared to other regions. The fact there is an already established tradition and experience of UK transnational education in these countries adds to this greater demand.

Figure 3.10.1

Forecasts of global demand for UK higher education – onshore (base scenario) compared to transnational education



How reliable is this part of the model?

It is important to remember that the reliability of the approach to modelling employed here for projecting the demand for UK transnational education has its limitations, including:

- The UK data, which forms the basis of the model, is not fully complete.
- In some countries, the dominance of one UK provider, particularly the Open University or the University of London, tends to bias demand growth projections.
- The number of students on a UK transnational education programme is assumed to be related to the number of students available to travel to the UK, which in itself depends on the relative attractiveness of the UK as an education provider. These basic assumptions need to be tested more fully.

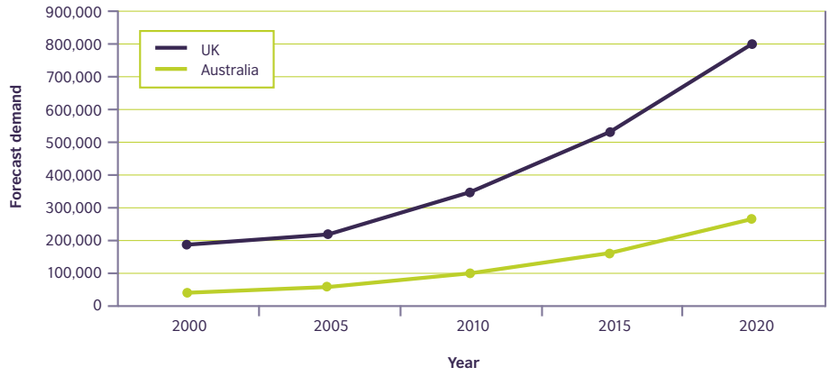
Comparative performance of the UK

There are very little data available that might facilitate estimation of the numbers of international students following US transnational education programmes globally. However, more data are available for Australia, and this reveals that there is a larger difference between UK and Australian market share for transnational international student demand than there is for international student demand for onshore programmes in each country.

The relative forecasts of transnational demand by the UK and Australia are illustrated in Figure 3.10.2 below. Note that the methodology employed to forecast international students following Australian TNE programmes, which was conducted by IDP, was different to that employed for UK forecasts.

Figure 3.10.2

Forecasts of global demand for transnational higher education – comparison of the UK and Australia



Future needs – refining the model

This model has used a relatively simple approach, using the best currently available data, to model the demand for transnational education. The British Council is developing research programmes to improve knowledge of this important area of activity. Research into student decision making has been identified as a critical factor and is to be developed. The aim is to define a discrete choice model for international students seeking transnational education. This could then be applied to other main provider countries to model demand.

The key areas for more detailed investigation include:

- how do students make choices about transnational education?
- what is the relationship between transnational education and travelling to study for an international qualification – are these separate groups of international students or is there a substitution effect?
- what, if any, are the differences in decision-making factors for undergraduate and postgraduate study?

3.11 Global forecasts for the UK by level of study

Global forecasts

Using the methodology and assumptions outlined in Section 2.4 (i.e. essentially through considering historical patterns, forecasting them into the future and then applying them to the proportions predicted through the base scenario), the following findings emerged:

- The number of international students in the UK following postgraduate taught courses is forecast to grow faster than for all other levels (6.3 per cent p.a.) from 77,000 in 2003 to 131,000 in 2010 and over 220,00 in 2020.
- Among all international students in the UK, the number undertaking postgraduate research is forecast to grow by about 4 per cent p.a. from 35,000 in 2003 to almost 46,000 in 2010 and over 70,000 in 2020.
- There are currently about 112,000 international students studying at the postgraduate level in 2003, or 47 per cent of all international students in the UK. This is projected to rise to almost 177,000 in 2010 (54 per cent) and just over 291,000 in 2020 (57 per cent).
- The remaining students are at the undergraduate level – specifically, 93,000 in 2003 studying for undergraduate degrees, forecast to rise to 117,000 in 2010 and 177,000 in 2020. In addition, there are just over 32,000 currently enrolled on other undergraduate programmes of study in 2003 such as study abroad. This is forecast to grow to 42,000 in 2020.

An analysis of global forecasts for international students in the UK by level of study is shown in Table 3.11.1 and Figure 3.11.1 below.

Table 3.11.1

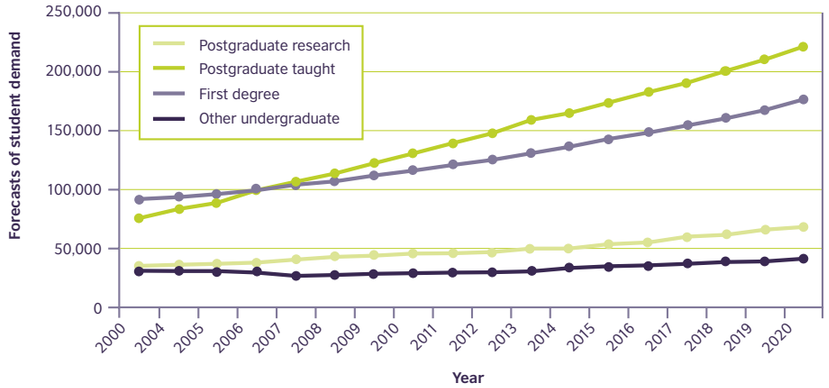
Forecasts of global demand for international student places in the UK (000s) by level of study
Base scenario

	2003	2005	2010	2015	2020	Growth*
Postgraduate research	35	37	46	54	70	4.0%
Postgraduate taught	77	90	131	174	221	6.3%
Total postgraduate	**112**	**127**	**177**	**228**	**291**	**5.7%**
First degree	93	97	117	143	177	4.0%
Other undergraduate	32	32	31	37	42	1.9%
Total undergraduate	**126**	**129**	**148**	**180**	**219**	**3.5%**
Total postgraduate as percentage of total	**47%**	**50%**	**54%**	**56%**	**57%**	
Total undergraduate as percentage of total	**53%**	**50%**	**46%**	**44%**	**43%**	

** Compound annual growth 2003–2020*

Figure 3.11.1

Forecasts of global demand for international student places in the UK (000s) by level of study
Base scenario



Regional forecasts – postgraduate study

Table 3.11.2 provides an analysis of variations in regional demand for international postgraduate student places in the UK. Given the importance of Asia in terms of size of demand, its analysis is split into sub-regions.

The highest numbers of postgraduate research students are forecast to come from the following regions:

- East Asia (13,000 by 2020, or 8 per cent of all students from that region; half of these are from China)
- South East Asia (almost 12,000 by 2020, or 25 per cent of students from that region)
- North America (just over 5,600 students, or 23 per cent of students from that region).

The fastest growing major regions in terms of postgraduate research international students in the UK are predicted to be South East Asia (7.2 per cent increase per annum) and South Asia.

The highest numbers of international students on postgraduate taught programmes are forecast to come from the following regions:

- East Asia (almost 74,000 in 2020, or 45 per cent of all students from that region, including 55,000 from China)
- Western Europe (just over 50,000 students in 2020, or 40 per cent of students from that region).

These are forecast to be followed by South Asia (just over 34,000, or 65 per cent of students from that region, with almost 21,000 of these coming from India) and South East Asia (just over 19,000 students, or 40 per cent of students from that region).

Overall, the average annual compound rate of growth in international student numbers following postgraduate taught programmes is greater than 8 per cent from all these regions. Postgraduate taught programmes either become or retain their position as the leading level of study for international students in the UK for most major source regions.

Table 3.11.2

Forecasts of global and regional demand for international student places in the UK (000s)
Postgraduate research and postgraduate taught students – base scenario

	2003	2005	2010	2015	2020	Growth*
Total Asia						
Postgraduate research	**9.8**	**9.8**	**12**	**14.8**	**19.8**	**4%**
Postgraduate taught	**28.8**	**36**	**61.4**	**90.7**	**127.8**	**9%**
East Asia						
Postgraduate research	4.5	4.2	3.6	3.4	4.9	0%
Postgraduate taught	16.6	20.3	33.9	50.4	73.8	9%
South East Asia						
Postgraduate research	3.8	4.2	6.9	9.2	12	7%
Postgraduate taught	5.2	6.1	9.9	14.8	19.2	8%
South Asia						
Postgraduate research	1.3	1.3	1.3	1.9	2.6	5%
Postgraduate taught	6.7	9.3	17.2	25	34.2	10%
Total Europe						
Postgraduate research	**14.2**	**16**	**19**	**20.5**	**28.1**	**3%**
Postgraduate taught	**31.1**	**35.8**	**46**	**53**	**56.3**	**3%**
Total Africa						
Postgraduate research	**1.6**	**1.5**	**1.6**	**1.7**	**1.8**	**1%**
Postgraduate taught	**4.8**	**4.6**	**6.5**	**9**	**12.6**	**6%**
Total Americas						
Postgraduate research	**5.1**	**5.2**	**5.6**	**6.1**	**6.5**	**1%**
Postgraduate taught	**7.4**	**8**	**9.7**	**11.1**	**12.4**	**3%**
Middle East						
Postgraduate research	**2.8**	**2.9**	**3.2**	**3.5**	**3.8**	**2%**
Postgraduate taught	**3**	**3.4**	**5.1**	**6.4**	**7.9**	**6%**
Oceania						
Postgraduate research	**0.6**	**0.6**	**0.5**	**0.4**	**0.4**	**-3%**
Postgraduate taught	**0.7**	**0.7**	**0.8**	**1**	**1.1**	**3%**

** Compound annual growth 2003–2020*

Regional forecasts – undergraduate study

- South and East Asia are the only regions in which there is forecast to be significant annual growth in students seeking undergraduate studies (over 9 per cent in both cases).
- Western Europe is predicted to experience an overall decline in first-degree students during the forecast period, in favour of postgraduate students.
- Relatively speaking, the proportion of students following first-degree programmes would not seem to vary significantly for most major source markets. There is however, predicted to be a large increase in the proportion of East Asian (mainly Chinese) students who wish to follow first degree programmes in the UK, and a large decrease for South East Asia and Western Europe (as a proportion of all students from each of these regions). This is probably due to the differences in relative growth rates for the supply of undergraduate opportunities in each of these countries and regions.

The forecasts of undergraduate international student numbers in the UK, split into major regions, are shown in Table 3.11.3.

Table 3.11.3

Forecasts of global demand for international student places in the UK (000s)
First degree and other undergraduate students – base scenario

	2003	2005	2010	2015	2020	Growth*
Total Asia						
First degree	**29.6**	**32.8**	**49.7**	**72.5**	**103.4**	**8%**
Other undergraduate	**5.9**	**6.6**	**7**	**10.4**	**14.6**	**6%**
East Asia						
First degree	16.6	19.9	32.3	50.4	73.8	9%
Other undergraduate	4.8	5.3	5.5	7.8	11.5	5%
South East Asia						
First degree	9.4	9.1	9.8	11.1	14.4	3%
Other undergraduate	0.6	0.7	0.9	1.8	2.4	10%
South Asia						
First degree	3.4	3.6	7.3	10.8	15.1	10%
Other undergraduate	0.5	0.5	0.7	0.7	0.7	3%
Total Europe						
First degree	**50**	**49.9**	**49.8**	**48.9**	**47.6**	**0%**
Other undergraduate	**15.4**	**13.5**	**12**	**14.4**	**13.7**	**0%**
Total Africa						
First degree	**6.2**	**5.9**	**7.8**	**10.2**	**13.1**	**5%**
Other undergraduate	**3.7**	**5.1**	**6.8**	**8.9**	**11.8**	**6%**
Total Americas						
First degree	**3.8**	**4.1**	**5.1**	**6**	**6.8**	**4%**
Other undergraduate	**6.1**	**6**	**5.9**	**6.4**	**7.3**	**1%**
Middle East						
First degree	**3.2**	**3.4**	**4**	**4.7**	**5.5**	**3%**
Other undergraduate	**0.7**	**0.7**	**1**	**1.4**	**1.9**	**7%**
Oceania						
First degree	**0.3**	**0.3**	**0.3**	**0.4**	**0.4**	**1%**
Other undergraduate	**0.3**	**0.4**	**0.5**	**0.7**	**0.8**	**5%**

** Compound annual growth 2003–2020*

The limitations of this model are that it is not possible to predict accurately the likely changes in demand for levels of study as markets mature. For example:

- As the US and some Western European markets have evolved, the demand for study abroad programmes has increased more rapidly than for other levels.
- The growth of provision of undergraduate places in many of the main source countries for MESDCs students can result in a much greater rate of growth in demand for international postgraduate studies – as is currently the case in some South East Asian countries.

Comparison with the US and Australia

The analysis has shown that the UK is forecast to increase the proportion of its international students studying at the postgraduate level, from an already high base.

By comparison, Australia historically has had a smaller proportion of international students at the postgraduate level. Currently about one-third of international students in Australian higher education are studying at the postgraduate level. This proportion is getting larger each year, albeit in quite small increments (about 1 per cent per year). Table 3.11.4 shows the most recent international student data on level of study for Australia and the US, as well as for the UK for 2003. Currently about half of all international students in the US are enrolled at the postgraduate level. If, as forecast, the postgraduate proportions for international students in the UK increase significantly over time, it could overtake the US to have the largest proportion of postgraduate students (as a percentage of all international students) of all the MESDCs.

Table 3.11.4

Global demand for international student places by level of study
Comparison of the UK, US and Australia

	UK	US	Australia
Postgraduate research	14.7%	50.7% (Unable to distinguish different types of PG study from one another)	4.6%
Postgraduate taught	32.4%		27.7%
First degree	39.1%	49.3% (Unable to distinguish different types of UG study from one another)	62.0%
Other undergraduate	13.4%		5.7%

3.12 Global forecasts for the UK by subject area

The following broad subject categories were used to report forecasts and are based on Higher Education Statistics Agency (HESA) subject definitions.

Table 3.12.1

Subject area classification

Subject area name	Includes such areas as
Architecture and building	Architecture, building, planning
Arts and humanities	Mass communication studies, documentation studies, foreign languages, linguistics, literary studies, history, philosophy, creative arts and design
Business studies	Business, management and administrative studies, finance, accounting, marketing, travel, tourism and hospitality studies
Computing science	Computer science, software engineering
Education	Teacher training, academic studies into education
Engineering and technology	Engineering, materials and minerals technology, metallurgy, industrial biotechnology, maritime technology
Law	Law
Medicine/health sciences	Medicine, medical science, pharmacy, allied health, nutrition, nursing, opthalmics
Physical, mathematical and life sciences	Biological sciences, agriculture, veterinary sciences, forestry, physical and terrestrial geographical and environmental sciences, mathematics, chemistry, physics
Social science	Social studies, anthropology, economics, politics
Other	Combination studies and unclassified

An analysis of the projected demand for international students in the UK, according to subject of study and region of origin, reveals the following:

Business studies: This continues to be the subject area in greatest demand. The demand for this subject area is predicted to rise from 51,000 (21 per cent of all students) in 2003 to 75,000 (23 per cent) in 2010 and 131,000 (26 per cent) in 2020.

Computing science: This area is likely to experience the highest growth in demand at about 8.5 per cent p.a. and become the third most popular subject overall. In 2010 there are forecast to be 34,000 students (10 per cent of all international students) growing to 64,000 (13 per cent) in 2020.

Arts and humanities: Although total numbers seeking studies in these areas are predicted to rise from the current 43,000 to 70,000 in 2020, the proportion of international students following these programmes is likely to fall over the forecast period, from 18 per cent in 2003 to 14 per cent in 2020. However, even in 2020 the area is predicted to remain second only to business studies in terms of total numbers.

All other subjects are predicted to experience growth over the period of the study; however, the numbers of students on these programmes is likely to decrease as a proportion of the overall total due to the relative strength in demand for business studies and computing science.

Table 3.12.2 summarises the findings at the global level by showing the forecasts and the breakdown of the total that each subject area represents in the given year.

Table 3.12.2

Forecasts and composition of global demand for UK higher education by subject area (000s)
Base scenario (proportions (%) of total are in italics)

	2003	2005	2010	2015	2020	Growth*
Business studies	51 *(21)*	54 *(21)*	76 *(23)*	100 *(24)*	132 *(26)*	6.0%
Arts and humanities	43 *(18)*	42 *(16)*	49 *(15)*	58 *(14)*	70 *(14)*	3.3%
Computing science	16 *(7)*	20 *(8)*	34 *(10)*	48 *(12)*	64 *(13)*	8.5%
Engineering and technology	30 *(13)*	32 *(13)*	39 *(12)*	48 *(12)*	59 *(12)*	4.1%
Physical and math. sciences	23 *(10)*	24 *(9)*	28 *(9)*	33 *(8)*	39 *(8)*	3.2%
Social Science	21 *(9)*	22 *(9)*	26 *(8)*	31 *(8)*	38 *(7)*	3.6%
Medicine/health sciences	17 *(7)*	18 *(7)*	22 *(7)*	26 *(6)*	32 *(6)*	3.8%
Law	12 *(5)*	12 *(5)*	14 *(4)*	18 *(4)*	21 *(4)*	3.8%
Education	10 *(4)*	10 *(4)*	12 *(4)*	5 *(4)*	18 *(4)*	3.8%
Architecture and building	6 *(3)*	6 *(2)*	8 *(2)*	9 *(2)*	12 *(2)*	4.0%
Other	8 *(3)*	16 *(6)*	18 *(6)*	21 *(5)*	25 *(5)*	4.3%

** Compound annual growth 2003–2020*

A regional analysis of the changing pattern of demand was undertaken in order to identify those countries and regions that were driving change in the three largest subject areas. Two of these subject areas are also the fastest growing.

Business studies

- East Asia and South Asia are driving the growth in demand for business studies, with compound annual growth rates of 9.9 per cent and 7.5 per cent respectively over the forecast period. Demand for business studies from East Asia is predicted to grow from almost 14,000 in 2003 to almost 34,000 in 2010 and almost 74,000 in 2020.
- Total demand from the Asian region accounts for 43 per cent of all international students in business studies in 2003, but this increases to 58 per cent in 2010 and 70 per cent in 2020. Conversely, demand from Europe falls as a proportion of the global demand, from 42 per cent in 2003 to 29 per cent in 2010 and 19 per cent in 2020. Actual annual compound growth from Europe is only just over 1 per cent.

An analysis of the forecast regional demand for business studies in the UK is shown in Table 3.12.3

Table 3.12.3

Forecasts and composition of regional demand for UK higher education in business studies by key regions (000s)
Base scenario (proportions (%) of total are in italics)

	2003	2005	2010	2015	2020	Growth*
East Asia	13.8 *(27)*	18.4 *(34)*	33.9 *(46)*	50.4 *(52)*	73.8 *(58)*	9.9%
South East Asia	4.4 *(9)*	4.4 *(8)*	4.4 *(6)*	4.4 *(5)*	4.4 *(3)*	0.0%
South Asia	3.3 *(6)*	3.3 *(6)*	5 *(7)*	7.2 *(7)*	9.9 *(8)*	7.5%
Western Europe	18.2 *(36)*	17.1 *(32)*	18.1 *(24)*	18.7 *(19)*	19.3 *(15)*	0.7%
Eastern Europe	3 *(6)*	3.2 *(6)*	3.8 *(5)*	4.4 *(5)*	4.9 *(4)*	3.0%
Total Africa	3.8 *(7)*	3.5 *(6)*	4.4 *(6)*	5.6 *(6)*	7.3 *(6)*	4.6%
North America	1.5 *(3)*	1.5 *(3)*	1.6 *(2)*	1.8 *(2)*	2 *(2)*	1.8%
Middle East	1.5 *(3)*	1.4 *(3)*	1.6 *(2)*	1.9 *(2)*	2.3 *(2)*	3.2%

Compound annual growth 2003–2020

Arts and humanities

- Asia is predicted to succeed Europe after 2015 and become the leading source region for international students coming to the UK to study arts and humanities. Asia currently provides 26 per cent of the global total for arts and humanities among international students in the UK. However, this should grow to about 30 per cent in 2010 and then 44 per cent in 2020. This is an annual compound growth rate of 6.9 per cent p.a. The largest contribution to this growthis predicted to come from East Asia.
- Actual demand from Europe is predicted to be relatively stable, although as a proportion of total global numbers is likely to fall from 53 per cent in 2003 to 49 per cent in 2010 and then 37 per cent in 2020.

An analysis of the forecast regional demand for arts and humanities in the UK is shown in Table 3.12.4.

Table 3.12.4

Forecasts of regional demand for UK higher education in arts/humanities studies by key regions (000s)
Base scenario (proportions (%) of total are in italics)

	2003	2005	2010	2015	2020	Growth*
East Asia	8.9 *(21)*	8.8 *(21)*	11.6 *(24)*	17.3 *(30)*	25.3 *(36)*	7.0%
South East Asia	1.5 *(3)*	1.4 *(3)*	1.9 *(4)*	2.5 *(4)*	3.3 *(5)*	5.6%
South Asia	0.7 *(2)*	0.7 *(2)*	1.1 *(2)*	1.6 *(3)*	2.2 *(3)*	7.7%
Western Europe	21 *(48)*	20.1 *(48)*	21.5 *(44)*	22.4 *(38)*	23 *(33)*	0.8%
Eastern Europe	2.2 *(5)*	2.1 *(5)*	2.5 *(5)*	2.8 *(5)*	3.1 *(4)*	2.6%
North America	5.4 *(12)*	5.3 *(13)*	5.9 *(12)*	6.4 *(11)*	7 *(10)*	1.8%
Total Africa	1.6 *(4)*	1.4 *(3)*	1.7 *(4)*	2.2 *(4)*	2.9 *(4)*	4.5%
Middle East	1 *(2)*	1 *(2)*	1.2 *(2)*	1.4 *(2)*	1.7 *(2)*	3.2%

** Compound annual growth 2003–2020*

Computing science

The demand for computing science studies among international students in the UK is forecast to grow from all source regions globally, to include:

- 12.3 per cent annual average growth for South Asia
- strong average growth for Europe (including almost 10 per cent per annum in Eastern Europe)
- strong growth for the Middle East and Africa (including 9 per cent per annum from sub-Saharan Africa).

Asia is forecast to remain the dominant source region for this subject area over the period. In 2003, it accounted for about 47 per cent of total numbers of international students in the UK. This is predicted to rise to 55 per cent by 2020. Growth from Asia for this subject area is likely to increase from 7,700 international students in the UK in 2003, to 17,500 in 2010 and then to about 35,000 by 2020. South Asia is likely to account for more than half of the Asian total demand by 2020.

An analysis of the forecast regional demand for computing science in the UK is shown in Table 3.12.5.

Table 3.12.5

Forecasts of regional demand for UK higher education in computing science studies by key regions (000s)
Base scenario (proportions (%) of total are in italics)

	2003	2005	2010	2015	2020	Growth*
East Asia	3.6 *(22)*	3.6 *(18)*	4.7 *(14)*	7.1 *(15)*	10.3 *(16)*	7.1%
South East Asia	1.7 *(11)*	1.5 *(8)*	2.1 *(6)*	2.8 *(6)*	3.6 *(6)*	5.5%
South Asia	2.3 *(14)*	4.2 *(21)*	10.6 *(32)*	15.4 *(32)*	21.1 *(33)*	12.3%
Western Europe	5.1 *(31)*	6.1 *(31)*	8.9 *(26)*	12 *(25)*	15.2 *(24)*	6.6%
Eastern Europe	0.6 *(4)*	0.8 *(4)*	1.4 *(4)*	2.2 *(4)*	3 *(5)*	9.6%
Total Africa	1.5 *(9)*	1.9 *(10)*	3.3 *(10)*	4.8 *(10)*	6.3 *(10)*	8.8%
Middle East	0.8 *(5)*	1 *(5)*	1.9 *(6)*	3.2 *(7)*	3.9 *(6)*	10.6%
North America	0.3 *(2)*	0.3 *(2)*	0.4 *(1)*	0.4 *(1)*	0.5 *(1)*	1.8%

** Compound annual growth 2003–2020*

Comparison with the US and Australia

Table 3.12.6 provides the breakdown by subject area for the three leading English-speaking destination countries. For the UK, 2003 data are used, whereas Australia and the US are based on 2002 data. The figures are expressed in proportions. Unfortunately, there is no common standard for reporting subject areas between countries and this limits direct comparability.

The analysis indicates that, while business studies was the leading subject area for international students in all three destination countries, the proportion studying this subject in Australia was far higher than in the other two countries. Both the US and UK achieved greater diversity in subject area – with arts and humanities being more popular in the UK, and engineering being more popular in the US.

Table 3.12.6

Global demand for international student places by subject area
Comparison of the UK, US and Australia

UNITED KINGDOM		UNITED STATES		AUSTRALIA	
Subject area	**% of all students**	**Subject area**	**% of all students**	**Subject area**	**% of all students**
Business studies	21%	Business and management	20%	Management and commerce	36%
Arts and humanities	18%	Engineering	17%	IT	20%
Engineering and technology	13%	Mathematics and computer sciences	12%	Engineering	9%
Physical and Math. Sciences	10%	Other	10%	Society and culture	9%
Social science	9%	Social sciences	8%	Creative arts	6%
Computing science	7%	Physical and life sciences	7%	Health	6%
Medicine and health sciences	7%	Undeclared	6%	Non-award courses	5%
Law	5%	Fine and applied arts	5%	Natural and physical sciences	5%
Education	4%	Health professions	5%	Architecture	3%
Architecture and building	3%	Humanities	3%	Education	2%
Other	3%	Intensive English language	3%	Agriculture	1%
		Education	3%	Food, hospitality and personal services	0%
		Agriculture	1%		

3.13 Gender-related considerations

As part of the project, an analysis of the gender balance of international students on UK programmes was undertaken. This was based on recent HESA (2003) statistics. It was not possible to obtain trend data. The findings are shown in Table 3.13.1 and discussed below.

Table 3.13.1

Gender breakdown of international students in UK higher education by level of study 2002–03

	Postgraduate research	Postgraduate taught	Undergraduate	Total
Female	17,000	47,000	53,000	
Male	25,000	56,000	56,000	
% female	40%	46%	48%	48%

The overall average of 48 per cent for female participation across all levels of study is higher than the other levels individually. This might indicate that there are a significant number of students categorised as 'other undergraduate' and not included in the analysis. These include international students on both study abroad and health sector (mainly nursing) related programmes. Both of these tend to have significantly more female students than male.

However, it is more useful to consider individual country and level of study analyses. Table 3.13.2 sets out the gender balance from a number of key destination countries (non-EU) and Table 3.13.3 provides an EU-specific analysis.

Table 3.13.2

Female participation as a percentage of international students in UK higher education by main source country and level of study 2002–03

	Postgraduate research	Postgraduate taught	Undergraduate	Overall
China	40	56	53	53
India	32	21	29	25
Japan	50	58	66	63
Malaysia	38	45	44	43
Singapore	31	45	44	43
South Korea	28	50	52	45
Taiwan	47	67	56	61
Thailand	52	64	42	57
USA	44	53	63	59

Table 3.13.3

Female participation as a percentage of each EU member states' students in UK higher education by level of study (2002–03)

	Postgraduate research	Postgraduate taught	Undergraduate	Overall
Belgium	43	45	51	50
France	40	47	47	48
Germany	38	46	55	52
Denmark	50	47	64	57
Greece	42	42	36	40
Finland	54	60	70	67
Ireland	51	59	57	60
Italy	46	52	52	52
Sweden	35	52	65	61
Netherlands	44	41	57	52

Of particular note is the domination by Indian males at all levels of study. The female participation rate for postgraduate taught programmes for a number of East Asian countries – including Taiwan, Thailand, Japan and China – is high. This relatively higher rate of female participation is also reflected at the undergraduate level for Japan, China, Thailand, Taiwan and USA.

There is one element of consistency for EU countries and that is the higher participation rate of women (particularly from Scandinavia) on undergraduate programmes – except for Greece and France. Female participation on postgraduate taught programmes is high for Finnish and Irish students.

This gender-specific knowledge might assist the formulation of marketing strategies.

3.14 Impact of increased in-country provision in main source countries

One factor influencing the private demand for international student places is the availability and access to higher education places in the student's home country. The model does take this into account by projecting the change of higher education participation rates relative to per capita income growth in each country. However, if a country accelerates its supply of higher education places faster than that allowed for in the model, the demand for international higher education student places may fall. The two countries where this would have the largest impact in the overall forecast are China and India.

If both these countries were able to provide additional in-country places (by regular domestic provision or through some form of transnational education supply), to meet the needs of their potentialinternational students over the period of the study, then there would be a reduced rate of global demand for international study. A scenario where both these countries increase domestic higher education places, at a rate sufficient to reduce the demand for overseas education by their nationals, has been considered. The magnitudes of the reductions considered were 33 per cent, 50 per cent and 67 per cent.

Table 3.14.1

Summary of forecasts of global demand for international student places and UK market share of MESDCs if additional in-country places are not provided in China and India. Base scenario conditions

	2003	2005	2010	2015	2020
Total – all destination countries (000s)	2113	2371	3260	4384	5815
Total – all MESDCs (000s)	988	1096	1507	2000	2614
Total – UK only (000s)	238	256	325	407	511
UK share of MESDCs	24.1%	23.4%	21.5%	20.4%	19.5%

Although total student numbers in the UK are projected to decline when Chinese and Indian demand is reduced, the actual UK share of international students across all MESDCs would increase as a proportion of the total number. Under these conditions, it would be the US that would probably lose total market share as it is more dependent on student recruitment from India and China.

The overall net impact would be a total decrease in demand in 2020 for UK higher education places from 511,000 to 457,000, if international student demand from China and India reduced by 33 per cent. If demand from these countries reduced by 67 per cent, the total numbers of international students would decline further to 404,000. The decline is most pronounced after 2015.

Table 3.14.2

Forecasts of global demand for international student places in the UK (000s)
If additional in-country places are provided in China and India. Base scenario conditions

	2003	2005	2010	2015	2020
Global total to UK (000s) – international students reduced by 33% from India, China	229	244	321	372	457
Global total to UK (000s) – international students reduced by 50% from India, China	224	238	292	354	430
Global total to UK (000s) – international students reduced by 67% from India, China	220	232	281	337	404

Optimistic scenario conditions: If the same situations are applied to the optimistic scenario, the results are similar in nature. That is, the number of students going to the UK decreases, but not as fast as for the total of all other MESDCs. The changes in market share are once again not large; however, the decrease in actual student numbers forecast to come to the UK is large, especially after 2015.

Under the conditions whereby international demand from China and India is reduced by 33 per cent as a result of local provision of student places, by 2010 the number of their students seeking UK higher education is reduced by only 30,000. In 2015, the difference increases significantly to about 55,000 students and by 2020 could reach a total of 100,000 students (or 11 per cent of the global market). If the Chinese and Indian markets reduce by a greater proportion, then the magnitude of these changes is even greater.

Table 3.14.3

Summary of forecasts of global demand for international student places and UK market share of MESDCs if additional in-country places are not provided in China and India. Optimistic scenario

	2003	2005	2010	2015	2020
Total – all destination countries (000s)	2113	2371	3260	4384	5815
Total – all MESDCs (000s)	988	1096	1507	2000	2614
Total – UK only (000s)	240	271	407	603	869
UK share of MESDCs	24.3%	24.7%	27.0%	30.1%	33.3%

Table 3.14.4

Forecasts of global demand for international student places in the UK (000s) if additional in-country places are provided in China and India. Optimistic scenario

	2003	2005	2010	2015	2020
Global total to UK (000s) – international students reduced by 33% from India, China	230	258	377	548	772
Global total to UK (000s) – international students reduced by 50% from India, China	226	251	362	520	724
Global total to UK (000s) – international students reduced by 67% from India, China	221	245	347	493	675

3.15 Forecasts of the UK domestic to international ratio

Given the forecast strong growth in demand from international students, it is necessary to consider the likely proportion of the total student population that they may constitute over the forecast period.

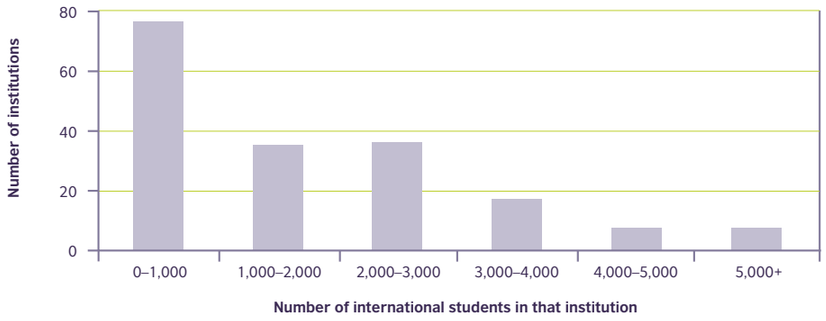
Will the UK higher education system be able to cope with the increased numbers of international students projected by this study? Issues connected with diversity of source countries of students, preferred programmes of study, human and physical resource needs, and so on are discussed in chapter 4.

Although there are historical data on UK domestic student numbers, it proved impossible to obtain any long-term projections. A recent study by the Higher Education Policy Institute (HEPI)[16] indicated that higher education in England would require between an extra 175,000 and 250,000 places by 2010 to cope with the overall student population increase due to the birth rate increase of the age cohort. This would not include any net addition to provide for possible increases in higher education participation rate for the age group across the UK.

Given this background, it was decided for the purposes of this study to undertake projections based on trends over the five years to 2001–02. The annual rates of increase at each individual level of study were relatively consistent. The average rate of increase over the five-year period was calculated and then employed to project UK domestic student numbers to 2010 and 2020. The part-time student numbers quoted are total head-count figures and not full-time equivalent student numbers. The actual numbers so generated are less than for the HEPI analysis. This was considered to be acceptable as it represented a more conservative approach. The projections detailed in Table 3.15.1 for 2010 and 2020 are based on the base scenario conditions.

Figure 3.15.1

Distribution of international students across UK higher education institutions 2002–03



Considering the implications of the very best case for the UK internationally in terms of attracting the largest possible number of international students, as described under the optimistic scenario conditions, the corresponding percentages would be:

- All students (PG and UG)
  2010: 13% 2020: 21%
- All full-time students (PG and UG)
  2010: 18% 2020: 30%

At the all-UK level, these proportions of students within the total number would seem to be manageable. However, they do mask the fact that these students would not be spread evenly across either institutions or courses within them. To illustrate this Figure 3.15.1 shows the distribution of international students across all UK higher education institutions in 2002–03. This indicates that 43 per cent of institutions have less than 1000 students; however, these tend to be a mix of small and specialist institutions.

[16] *Higher Education Policy Institute (HEPI), 2003,* Demand for UK Higher Education to 2010: Some Political and Policy Implications. *HEPI Report Summary 4. Available at www.hepi.ac.uk/articles/docs/hedemand.doc*

3.16 Sources of funding for international students

Much of the strong growth in numbers of international students over the last few years has been due to the private demand from individuals. An analysis of funding sources for international students[17] in the UK indicates the following:

- **Undergraduate and related**: Nearly two-thirds of the approximately 143,000 students are privately funded. The remaining one-third has their fees met from a variety of UK sources including fee waivers or scholarships. The largest single UK government source of public funds at this level is the Department of Health – mainly for nurse-related training.
- **Postgraduate taught courses**: Of the approximately 88,000 international students on these programmes, approximately 86 per cent have their fees met from sources outside the UK.
- **Postgraduate research**: Approximately 40 per cent of the 39,000 international students on postgraduate research programmes receive some payment of fees from UK. This comes in the form of fee waivers, UK government scholarship or related support. Approximately 15 per cent (6,000) receive scholarships from their own government or employing institutions. Most of the remaining 60 per cent are privately supported.
- **Transnational education**: The main growth in transnational education has been due to privately funded students; these include both those who are mid-career professionals and whose lifestyle and personal circumstances precludes study abroad, and those seeking to access quality international education at lower cost in their own country. There is every indication that private funding will continue to be the main driver of demand in this sector over the period of this study.

In general, there is very little data available from other countries regarding the funding support available for international students. The US does have some information that is published through Open Doors. This indicates that, in 2002–03, some 78 per cent of international undergraduate students were privately funded. For international postgraduates the privately funded proportion fell to 51 per cent. Some 38 per cent of postgraduate students reported that the US university at which they were studying was their primary source of funds, and it is believed that, for postgraduate research students in particular, this fraction is significantly higher, possibly over 50 per cent.

Of particular interest is the relatively large number of privately funded international students on UK postgraduate taught courses. The possible reason for this is that as participation rate in a country at the undergraduate level increases, then it is more likely that a postgraduate qualification will become a key discriminator in the labour market.

The above patterns of funding are likely to be reinforced over the next few years for a number of reasons. The trend towards individual private funding of higher education across the world will grow as more and more countries seek to increase the prices charged for their higher education programmes to meet the full costs of delivery. This applies to both domestic and international students. The net results of this trend will probably be that an increasing number of students will be internationally mobile; they will seek to access the most cost-effective education for their requirements, wherever it might be delivered.

Postgraduate research students represent a special case. They are essential for the UK and its universities; the need is to maintain and grow innovative research. It is likely that there will be a need to increase direct financial support from both government and individual universities to attract the best researchers internationally available, due to the more competitive international environment.

3.17 A two-way flow: UK students' demand for international education

As part of the study, it was possible to assess the participation rate of UK students in international higher education. Indications are that the annual growth rate for UK students (1.3 per cent) is the smallest for any of the major English-speaking nations, and among the smallest growth worldwide, along with several other European countries and Japan. The total number of UK students studying outside the UK in all countries is forecast to grow from the current figure of 28,000 to 35,000 in 2020.

[17] *HESA Data 2002–03*

4 Analysis of implications

If the UK is able to respond successfully … all students (international and domestic) will benefit significantly. They will have access to a greater range of programmes that are better resourced, offered through a wider and more flexible mix of delivery modes and at the world's leading level of quality.

Vision 2020, section 4.4

4.1 Introduction

International education is an economic sector that is extremely attractive to a country: it is knowledge-intensive, high value-added and offers long-term benefits. When compared with other activities in the services sector of the economy, growth (both achieved and projected) is extremely impressive. Few sectors of the world economy could match such predictions for sustained growth. For example, the total value of education exports to the UK is estimated at over £10 billion p.a. and has been growing significantly and consistently.

International education is at the centre of the UK's knowledge economy and the nation's long-term wealth and prosperity. It provides the UK with a dynamic, high-skill and sustainable export industry that has far-reaching national implications.

The UK has been a global leader, second only to the US, in the provision of higher education to citizens of other countries; but this research raises some fundamental questions for the future. This chapter provides an analysis of the research, summarising the market developments expected under the different scenarios presented in this report and setting out five key strategic issues for the UK and its higher education institutions. Although for ease of presentation these issues are dealt with individually, it should be noted that they are inextricably linked. They can be summarised as follows:

- **Strategic issue 1: ensuring quality**
  Can the UK maintain its quality position whilst significantly expanding provision?
- **Strategic issue 2: responding to global competition**
  How might the UK respond to the dramatic changes in the global market that may come from the new competitive environment?
- **Strategic issue 3: building capacity**
  Do institutions have sufficient physical and human capacity to respond to the potential huge opportunities presented?
- **Strategic issue 4: presenting diversity**
  How will the composition of demand change? Can the UK meet the challenge of diversity and student choice?
- **Strategic issue 5: delivering globally**
  How might the UK capitalise on its current global lead position for transnational provision?

In analysing these issues, this chapter seeks to answer the following questions:

- How might the UK capitalise more effectively on its current market position?
- How might UK providers ensure that they are meeting the needs of their students?
- How might UK institutions be more aware of and responsive to potential problems?

Finally, a conclusion discussing how the UK international education industry as a whole might capitalise on the potential opportunities of the changing global market is provided.

4.2 Summary of forecast market developments

Market growth

As the study demonstrates, the global demand for international student places is likely to increase from the current 2.1 million to about 5.8 million by 2020. Within the main MESDCs the equivalent demand growth could be from the current less than 1 million places to about 2.6 million places. As part of this, UK higher education may experience a tripling of the current level of demand to over 850,000 places by 2020.

Table 4.1 compares projected growth predicted for the UK under base and optimistic scenario conditions as described in detail in chapter 3. There are historical

Table 4.1

Projected growth of international students in UK HE under differing scenarios (000s)

Scenario	2005	2010	2015	2020	Growth*
Base	256	325	407	511	4.7%
Optimistic	271	407	603	869	8.1%

** Compound annual growth 2003–2020*

reasons for being optimistic. Globally, international student numbers have grown strongly and consistently. The number of international students in the US over the last ten years has averaged 3.1 per cent p.a. growth and for the MESDCs the overall average has been 6.1 per cent p.a. since 1997. Few areas of global economic activity have achieved such high levels of growth.

Similarly for UK HE programmes, delivered through a variety of arrangements transnationally, growth is forecast to increase very fast – from the current approximate figure of 190,000 students to over 800,000 by 2020. The UK is probably the current world leader in TNE with some 43 per cent of all international students on UK HE programmes following their study programmes through a full variety of TNE delivery modes – distance learning, validation and franchising arrangements, partnerships, overseas campuses and so on. In addition, many UK professional training programmes (e.g. marketing, accountancy, computing) are available globally through TNE (although these fall outside the scope of this study). Growth rates are forecast to be highest from South and East Asia. Five Asian countries – China, India, Malaysia, Hong Kong and Singapore – are projected to make up 75 per cent (598,000) of the global demand in 2020. Outside the main five Asian countries, demand from Sri Lanka and Pakistan is predicted to grow strongly, as it is from Russia and other Eastern European countries. Demand from Africa (in particular sub-Saharan Africa) is also forecast to expand, although from a much smaller base.

Increasing competition, changing customer expectations and new technology

The returns (academic, political, social and financial) available through engagement in international education can be high; consequently, the global market place is becoming increasingly competitive. New destination countries for students are emerging as governments increasingly realise the strong relationship between international education, prosperity and economic and political advantage. The sustained growth of the sector and the associated profitability is attracting new market entrants, both from traditional providers as well as from private and corporate interests.

In addition,students are becoming increasingly demanding and discriminating. This will significantly affect both student services and the nature of programmes on offer. New technology is also likely to have a fundamental impact, by:

- reducing barriers to entry through new types of delivery
- enabling the development of scalable models and the potential reduction of the cost base
- facilitating delivery in price-sensitive markets where previously this was not possible
- facilitating demand for increasingly more flexible and customised programmes and delivery mechanisms, including growth in demand for lifelong learning and transnational programmes
- making information on the range of opportunities more easily accessible.

Section 4.3 discusses these nature of the changes in more depth and a number of implications for future policy are provided.

4.3 Strategic issues

Ensuring quality

The conclusions in this research from the application of discrete choice modelling to the position of the UK are very clear: delivering on quality is of overriding importance to the UK. Recent evidence shows that a small shift in the perception of quality and associated value leads to significant rises in market share.

The role of the Quality Assurance Agency for Higher Education (QAA) is well recognised internationally, and the UK currently has wide global recognition for its quality of provision[18]. Many countries are now seeking to emulate this approach. International students are also becoming better informed; they frequently check institutional records on both teaching and research assessments. The fact that the QAA also makes its reviews publicly available sends a powerful global signal about the UK's commitment to quality.

International students perceive that the quality associated with acquiring a UK HE qualification will provide them with added advantage in the labour market. As competition for employment increases, an international study experience will be a vital discriminator for employers[19]. However recent research[20] has indicated that many international students experience a sharp drop in their perception of the UK as a quality education destination about three to six months into their programme. The reasons for this are not fully understood. Although there is an improvement in perception over the latter period of their stay and following return home, it is a cause for concern. This is to be explored in more detail as part of a proposed UKCOSA/British Council/Universities UK research study.

There are two areas in particular where the UK has been vulnerable over recent years. These are:

[18] *Education UK and PMI – four years on, research conducted by MORI for the British Council, 2003.*

[19] *Böhm and Lenssen, 2001.*

[20] *Education UK and PMI – four years on, research conducted by MORI for the British Council, 2003.*

- **International communications and media**: As education has come to the forefront of international business, so it has attracted increasing press coverage. Any problems associated with delivery of UK HE, whether in the UK or internationally, are immediately published in the international media. This will only increase as global communications and information improves.
- **Quality in TNE delivery**: There have already been a number of high profile-cases in which a few UK institutions have been criticised for quality assurance related to some programmes delivered outside the UK. These have had very damaging effects on the UK's reputation as a whole – particularly as they are published throughout the world's press. Other countries have suffered similarly: the criticism of some Australian programmes delivered in Malaysia resulted in a significant lowering of the quality perceptions of Australian education provision generally in Singapore and Malaysia[21].

Ensuring quality: implications for future policy and essential research

1 Any drop in the quality of provision, real or perceived, by UK HE providers will have strong negative consequences. But enhancing quality does have considerable associated costs. In the face of declining government funding and other costs' escalation what is the most cost-effective approach to quality assurance?

2 The most effective way of promoting more widely the added employment opportunities associated with a UK qualification needs to be identified.

3 Effective ways of dealing with bad news stories in the global press need to be found and implemented. Does the UK need an industry-wide PR and communications strategy?

4 The UK needs to ensure that it has in place an appropriate quality-assurance regime sufficient to meet the needs of the growing diversity of TNE programmes.

5 Further research is necessary to establish why there is a drop in perception of quality once a student undertakes a UK course of study.

Meeting the needs of international students: The quality imperative

Students will benefit significantly from accessing high-quality education in the UK. These qualifications will directly support their career aspirations and be recognised by employers and government in the student's home country.

Responding to growing global competition

The global education market is fundamentally changing, and dramatically increasing levels of competition can be seen to be coming from a variety sources. These are described below:

- **English medium competition** The existing MESDCs, led by the US and Australia, are likely to continue to present the main competition to the UK over the period of this study. However all, except the US, have significantly smaller national capacity for HE provision than the UK, and this may limit their ability to expand.

  An attraction that New Zealand, Canada and Australia offer, relative to the UK, is the enhanced opportunity to migrate to those countries for international students qualifying in their universities. This would ultimately impact on the perception of enhanced employability associated with those destinations.
- **New English medium providers** : These are best described in two separate groups. First, there are those countries whose national HE systems are predominantly delivered through the medium of English. Second, there are those with other primary languages of delivery (most notably the new European providers).

  Included in the first category are Singapore and Malaysia. Both countries have made it very clear that they wish to attract foreign universities with an international reputation to establish activities and attract international students. The University of Nottingham campus in Malaysia (and recent expansion into China) is a good example of an approach that has the potential to be beneficial to both Malaysia and the UK. However, there are other institutions from outside the UK developing and such initiatives will present an additional layer of competition.

  Similarly, India is growing capacity to attract international students both in India and globally, including in Malaysia. For example, the National Institute of Information Technology offers programmes[22] across Asia and Africa with links to America and Europe as well as on-line programmes. Additionally, a private sector medical school associated with established Indian universities has been established in Malaysia.

  Singapore is growing its capacity to attract international students with a target of up to 150,000 being suggested. A number of concessions are being offered to prestigious foreign institutions to establish operations to deliver in Singapore.

  A prime example of the second category is the establishment of EduFrance, which currently advertises some 150 programmes in French HE institutions delivered through the English language. NUFFIC[23] details on its website over 850 international courses delivered through English in HE institutions in the Netherlands. Similar developments are occurring in Sweden and Germany. New providers in English will also be available in Eastern Europe and the Baltic States.

[21] *Report at AEI/IDP International Education Conference. 2002*

[22] *See www.niit.com*

[23] *See www.nuffic.org*

- **The private sector and corporate universities**: About 25 per cent of US higher education students are enrolled in private sector institutions. However, in response to changing patterns of demand, increasing numbers are entering the new private sector institutions that offer more flexible approaches to delivery. Included in this new category is the University of Phoenix, which has over 100 centres across the US and operates centres in Puerto Rico and Canada and has links with India. There are also plans to expand into Europe. Similarly, the US education company Sylvan Learning Systems is growing rapidly with operations in Mexico, France, Guam, Hong Kong and Canada as well as in the US.

Responding to global competition: implications for future policy

The UK will face extremely strong, well-organised and potentially better resourced competition from its traditional competitors in the coming years. The emergence of the new competitors from Asia and Europe must be taken seriously. In many cases their governments have chosen to invest significantly as part of a broader foreign diplomacy agenda. Collectively, they could have a large impact. Also they have the potential to compete very effectively in niche areas (e.g. Netherlands and Germany in technology) and in specific source countries that they might target. What sector-wide strategy does the UK need to combat these new threats?

Meeting the needs of international students: impact of global competition

All students should benefit from greater competition which could lead to greater choice of programmes delivered more effectively and at a lower cost.

Building capacity

Perhaps one of the most significant problems for the UK will be to supply sufficient places to meet the projected demand. The implications in terms of building needs (for teaching and student accommodation), other physical resources and staff (both academic and support) are immense. The current total numbers of international students as a percentage of the total UK HE student population is about 10 per cent. A small number of institutions report up to 20 per cent international students on their campuses. Given the growth of participation rate for UK domestic students, the relative numbers of international students overall in the UK could be between 11.6 per cent (base scenario) and 21 per cent (optimistic scenario) of all HE students by 2020. There are several factors involved in providing a balanced response to the question of where flexibility might exist. These include:

- **Does capacity actually exist?** A recent survey of UK institutions[24] indicated that the majority considered they had sufficient capacity to meet the current rate of growth in international student demand over the short to mid-term. However, this research was limited in coverage and does need to be augmented by more structured research to establish more rigorously the size and scale. Additionally, from discussions with UK institutions, there is an indication that potential capacity is not evenly spread across subject areas, levels of study and institutions.
- **Domestic provision** UK higher education institutions will need to expand provision to meet projected additional demand from UK domestic students, providing this is in line with government targets. This is due to a 'bulge' in the age group to 2010 due to increased birth-rate. There is also pressure to increase participation in higher education towards 50 per cent of people aged 18–30 by 2010. UK student demand may change, for a variety of reasons and developments in student support arrangements within the UK may also influence demand.
- **Private sector provision**: A rapid growth in private sector provision in the UK could occur as the potential for revenue generation from international activities is very significant and would be attractive to many business operations. This might derive from foreign providers, independent UK operators or through franchised or validation arrangements.

  There has been rapid private sector growth elsewhere (e.g. US, Eastern Europe and South East Asia) and the increasing liberlisation of trade in educational services through GATS and other routes might well facilitate a similar pattern in the UK. There are already some indications that this is indeed happening in the UK as private providers are very active in ELT delivery and many also offer foundation courses for accessing higher education. Possible changes in higher education in the UK around the use of 'university' title may encourage more private sector engagement in UK higher education. A more direct approach towards growing quality provision and capacity more rapidly within the private sector might be through a greater variety of public–private partnerships coupled with validation or other similar arrangements.
- **Public–public and public–private partnerships**: UK public sector HE institutions have already demonstrated a high level of entrepreneurial flair in the development of programmes delivered in countries where there are supply constraints through a wide range of TNE arrangements. This approach could easily be extended to growing provision in the UK. The approach could involve UK universities, established in the international market already, agreeing franchises or validation arrangements in partnership with other UK higher and further education institutions in both public and private sectors, in which there might already be existing capacity.

[24] *Education UK and PMI – four years on, research conducted by MORI for the British Council, 2003.*

Building capacity: implications for future policy

1 Demand, even under the baseline scenario, is forecast to grow significantly up to 2020. However there appear to be bottlenecks and potential capacity issues in the UK system. What is the best way of addressing these?

2 Better market intelligence is needed to enable institutions to spread risk, widen their international product portfolio and address capacity issues. How might this be best captured and disseminated?

3 To maximise the benefits institutions will need to integrate their international strategy with objectives for the home market. What central support would be useful to facilitate this?

Meeting the needs of international students: greater capacity – better resources

Students will benefit through investment in domestic provision: additional capacity will be created; access to a wider range of programmes will be available; and choice of institution and delivery will be enhanced through a variety of public, private and public-private arrangements.

Presenting diversity

The concept of diversity has many dimensions, and this was well analysed in the IDP GSM 2025 report. Essentially diversity, in the context of international students in UK HE institutions, tends to relate to source regions and countries, study disciplines and levels of study.

Diversity is important for the UK and UK higher education for a number of reasons:

- **economic**: diversification of source countries for students helps institutions to reduce risk
- **academic**: diversity within the teaching environment provides benefits associated with the internationalisation of the learning processes and research. These include country and regional specific projects and programmes; language and culture; international comparative education; economic, social and political systems, etc.
- **political**: enhanced diversity will help extend the UK's international political, economic and social networks and the associated influence of these
- **socio-cultural**: these are potential internationalisation benefits for UK communities through encouraging closer engagement with international student populations.

From a student's perspective, how important is the concept of diversity? And does this vary with country and region? International student networks in UK institutions tend to contain mainly other international students – not necessarily from the same country. Indeed these have been reported to be very rewarding as Simon Bere, a Zimbabwean postgraduate student at Lancaster University (and a silver award winner at the 2003 UK IYSA[25]) so eloquently described:

> *I have tested that it is possible for races to co-exist in harmony. I share a flat with eight other students, five from China, one each from Greece, Denmark and Spain. We share the kitchen, use the same toilets and bathrooms and we have never had any problems. If anything we live as a family. If people from different races and cultures can live under the same roof, it is possible for them to live in harmony in the same country.*

But anecdotally, international students are reported to be generally surprised at their relatively low level of interaction with UK students.

The main challenge suggested by this analysis relates to ensuring a more even spread of international students from a diverse range of countries, subject areas, levels of study and institutions as well as promoting integration of international students.

- **Country and regional diversification**: This study clearly indicates the importance of Asia as the main source for students. Just over 50 per cent of the UK's demand is likely to come from Asia in 2020, and more if the optimistic scenario is realised. Within Asia, China and India are dominant. Encouragingly however, relative to the other MESDCs (other than the US), the UK has a more diverse range of countries from which it attracts students. There are currently some 32 countries that provide over 1,000 students each for UK HE institutions. A further ten countries are in the 500 to 1,000 student range.

  The UK needs to ensure wide diversification in its entire student population: UK, EU and non-EU international. This issue was discussed at a joint seminar sponsored by Universities UK and the British Council[26] where it was agreed that it was not appropriate, ethical, or acceptable (and probably not legal) to 'ration' places. Quality must be the paramount criterion for admission to a UK HE programme.

  While this might provide a stronger base for diversified growth for the UK, relative to the other MESDCs, there are additional costs associated with a drive for greater diversity of source country. More funds will need to be spent on marketing; for example, the costs of attracting an additional Brazilian or South African student are higher than for an Indian or Chinese student under current market conditions. Additionally, any reduction in effort in some of the current main markets will provide opportunities for competitors to exploit.

[25] *UK international Student of the Year Awards.*

[26] *Chinese Students in the UK: Universities UK and British Council joint seminar, July 2002.*

- **Diversity of subject**: The analysis of subject of study indicates the likely concentration of international students in a limited range of study areas by 2020. The top four areas[27] account for 65 per cent of all students. The comparable figure for the same four areas in 2003 (where they were also the lead topics) was 59 per cent.

  These figures represent the best analysis possible employing currently available data. However, what is impossible to predict, given data limitations and the absence of studies on international comparisons, is how the nature of increasing market maturity and changes in employment prospects associated with a particular qualification might impact on these proportions over the period of the projection.

  From historical evidence, change does seem to occur slowly in the global education market. By comparison with more mature domestic markets it might be concluded that:

  – increasing competition for employment will result in significant differentiation within each of the study areas, e.g. 'general' business studies will evolve to a variety of more specialist topics.

  – there will be an evolution to consumption-orientated choice (i.e. seeking 'psychic returns' to the education experience) rather than the more 'vocational' topics. This is a trend already noticeable in North America and Western Europe. Such moves might be reinforced by the shift to other patterns of study, e.g. study abroad.

- **Levels of study**: Forecasts are for a move away from undergraduate towards postgraduate study, particularly for postgraduate taught programmes. The current proportion of all international postgraduate students in UK institutions is about 47 per cent and this is projected to rise to 57 per cent by 2020. In terms of diversity, relative to the other MESDCs, this represents probably the greatest range of programmes.

  A major challenge for the UK is to attract more postgraduate research students. Numbers are projected to grow over the period but at a relatively more modest rate of about 4 per cent p.a. These students are essential for the UK's research and innovation.

Presenting diversity: implications for future policy and essential research

1 Meeting the imperatives of diversity, both country and regional, will provide difficult challenges for UK higher education. There are strong reasons for growing such diversity from a sector, institutional and student viewpoint and the choice of approach will require a delicate balance.

2 In terms of spread by subjects and levels, there is potential to diversify further and this could be to the benefit of both UK institutions and the students.

3 There is a major gap in our understanding of perceptions and needs from a student perspective. Additional research on this is essential and a joint project is planned[28].

4 The approach to international student recruitment for postgraduate students is in need of a more far reaching review. A joint Universities UK–British Council working group is being established to take this forward.

5 The proportion of international students to domestic students, and the proportion of students from a particular country as a fraction of total students, are frequently quoted as measures of diversity. Whether this is appropriate for UK universities to have programmes with only international students or even with students from just one or two countries need to be considered.

Meeting the needs of international students: diversity of choice

Students will benefit from having access to a broad range of options, enabling them to fulfil both career and personal aspirations through their study. Their study experience will be greatly enriched through the opportunities presented to meet and mix with students from a wider range of countries.

Delivering globally

Demand for transnational education is forecast to grow even faster than that programmes within the UK, but there are considerable associated risks.

It is inevitable that competition in this area will grow fast. The opportunities presented by new technologies and economies of scale are many. In particular, a number of countries (notably the US) are developing more sophisticated approaches for the provision of course modules through distance learning, including for their home campus students. They will be in a position to expand this activity internationally. The UK must position itself similarly if it wants to stay ahead. Current understanding of this sector is based on very limited statistics so further research will be essential.

Maintaining strict quality assurance is essential for all programmes (see 'Ensuring quality', page 67). Any failure to meet quality requirements is likely to have disastrous repercussions across the whole of the UK HE sector. The need for the UK is to review regularly and critically the full variety of TNE provision from the UK in each country.

Little is currently known about the decision-making approach of students seeking to pursue international higher education programmes in their home country. This was discussed in chapter 3 and research was proposed in a number of countries to improve understanding.

[27] *Business studies and related (24%), arts and humanities (16%), computing related (13%), and engineering and technology (12%).*

[28] *Proposed study on international student experiences: UKCOSA with the British Council and Universities UK.*

There are also a number of UK institutional issues. These include:

- How does the delivery of TNE fit within the overall mission of the UK institution?
- How can an institution ensure that the international student enrolled on a TNE programme receives a comparable experience to one following a programme on the UK campus?
- How might the appropriate staff and other resource needs be best met to ensure the delivery of the programme?
- Can adequate quality assurance measures be put into place to meet QAA guidelines in a globally competitive market?
- What sanctions might be available locally if partners fail to meet the standards required?
- UK institutions are not normally encouraged to take risks due to the regulatory and accountability requirements – how might they be supported to pursue potential opportunities?
- Can scaleable models be developed to meet the rising demand?
- Can programmes be delivered at a cost that allows for a level of pricing appropriate for the local market?

Delivering globally: implications for future policy and essential research

1 Many of these these activities are left to the entrepreneurial flair of individual institutions and departments. Can the UK industry as a whole adopt a more strategic approach (e.g. reviewing markets systematically and providing access to the necessary investment)?

2 Institutions need to invest significantly if they are to increase their TNE acivities globally. A number of UK institutions have been very entrepreneurial to date. How might other UK institutions learn from these?

3 There is a need for better market intelligence to be gathered, business opportunities to be developed and information disseminated to assist institutions in their strategic decision making.

4 Adequate provision needs to be made by UK institutions within their pricing policies for programmes to fully meet the quality assurance needs of the programme. Is an expanded role for the QAA necessary?

5 It is noticeable that only a few UK public–private partnerships have been developed in order to expand UK TNE delivery globally. What have been the barriers?

6 A more thorough analysis of global markets is essential if UK institutions are to be better advised on investment strategy.

7 Research is necessary to establish a clearer picture of students who seek to follow TNE programmes – both in terms of how they make their initial choices and their learning and support requirements.

Meeting the needs of international students: the TNE option

Students, who are unable to undertake a course of study overseas for whatever reason (financial, family, professional etc.) will benefit through being able to undertake a quality-assured UK programme in their home country, the final qualification being recognised by both government and employers. They will also benefit from the flexibility of delivery mechanisms and learning options designed to meet their personal circumstances.

4.4 Conclusion: realising opportunity

Economic value of international education

As was mentioned at the start of this chapter, international education is becoming an increasingly significant economic sector for many countries. Countries perceive that, by internationalising their education, they will be able to reap substantial benefits and improve their global competitiveness. This fact was acknowledged at the most senior level in the UK government in 1999, when Tony Blair launched the Prime Minister's Initiative. This specifically focuses on long-term relationship-building through international students to advance UK political and economic interests.

The forecast growth in global demand for international education described in this report presents very significant opportunities for the UK. In addition to the direct benefits to the UK economy, increased numbers of international students undertaking a UK education will also make a vital contribution to the UK's capacity for research, technological growth and innovation.

And this study shows tremendous opportunity for the UK across the EU, particularly in the area of postgraduate recruitment. While in the UK, students from the EU contribute over £460 million p.a. to the UK economy through their fee payments and living expenditure.

On the same terms, the total value to the UK economy of all international HE students by 2020 forecast under the optimistic scenario could be over £12 billion p.a. (at current prices), compared with nearly £8 billion p.a. in the base scenario. The 2003 value for this is estimated at £3 billion. If the UK is able to respond successfully to the strategic implications described in this section, all students (international and domestic) will benefit significantly. They will have access to a greater range of programmes that are better resourced, offered through a wider mix of delivery modes and at the world's leading level of quality.

The Prime Ministers' Initiative: towards a new strategy

The Prime Minister's Initiative (PMI) has been successful in growing the UK's ability to deliver internationally. It has provided an excellent example of how a strategic and co-ordinated approach to delivering a total programme at the national level can succeed.

It was launched against a backdrop of the UK losing market share to the other MESDCs. Much of this erosion in the UK's position had been due to rapid Australian growth across Asia, plus the entrance of Canada and New Zealand targeting similar markets. However, with efforts associated with the PMI since 1999, reinforced by a strong marketing drive from UK institutions, change has occurred. The UK would seem to have increased market share significantly in 2003 – although figures for all countries for 2003 have yet to be made public.

The key activities that have most contributed to success to date included:

- **The Education UK brand underpinning a worldwide marketing campaign**: This has successfully contributed to global awareness of the quality and accessibility of UK education.
- **Increasing the UK's marketing, counselling and information capacity through initiatives such as the development of the Education UK website**: There are now over 4 million visitors each year to the central site that hosts a database of some 500,000 courses.
- **The creation of strategic initiatives overseas in support of the campaign**: Most notably, these included the Real UK campaign, the International Student Awards and the Independent School's Council awards.
- **Changes in visa and right to work policies**: More student-friendly visa and right to work policies have been established. However, the impact of the former has been somewhat eroded recently by the introduction of new charges and EU residency permits.
- **Central co-ordination**: The Department for Education and Skills in London successfully coordinated and drew together a variety of government departments, devolved administrations and other interested bodies.
- **UK institutions** were able to take advantage of the new operating environment provided in the UK and invest strategically in marketing and related activities.
- **The British Council** was able to adopt a more cohesive and proactive approach to marketing globally with strategic education-marketing activity becoming a priority in all key markets.

Capitalising on the benefits

In considering future policy to capitalise on the benefits of the forecast market developments and to combat increasing competition, the following factors need to be considered:

- **The risk of not responding** The pessimistic scenario analysis demonstrates clearly how UK market share might collapse. The key implications of the results are that the UK must:
  - ensure the quality image of UK education is maintained above all
  - promote the enhanced employability of UK alumni in the global labour market
  - invest strategically to capitalise on the successes achieved recently.
- **Pricing UK education internationally** The analysis of the price escalation scenario indicates that the impact of a sudden price rise for UK education and training may not prove as serious as previously considered. This is because UK education is recognised internationally for its quality and the enhanced employment prospects associated with its qualifications. In a global market where demand currently appears to be running ahead of the supply of study places, affordability becomes relatively less important for many intending students, i.e. there is still sufficient demand to fill the places available at the higher prices.

  The net impact of this is likely to be an increased perception of the quality of UK provision. However, this influence is likely to be only short lived, given the rapid growth in information available through the web and the high rate of usage of this by students.

  As a consequence of the above analysis, should UK institutions increase their prices? The answer is not straightforward given the dynamism of the market, the rapid growth in competition (including new entrants with a strong reputation for quality) and the increasing drive of many countries to improve their own quality position. There might be short-term gains for some providers but the overall consequences for the UK in the mid- to long-term are likely to be negative.

Realising opportunity: implications for future policy

1 The UK international education industry needs a concerted national approach led by a clear strategic vision that directly engages with UK HE institutions to reflect their needs and constraints and facilitates their collaboration.

2 Investment is essential, to:
  - refresh, develop and reposition the Education UK brand to underpin a marketing strategy with the following aims: combatting increasing competition; conclusively demonstrating that a UK qualification is a better investment than that provided by competitor countries; and ensuring key messages of quality, value and relevance reach a wider audience
  - develop and grow the UK's position in TNE
  - develop and build long-term sustainable relationships with those who have experienced a UK education
  - form new alliances and partnerships
  - establish strategies to provide the physical and human resources necessary to deliver.

3 Assuring quality is vital, and this needs to encompass all education providers active in delivering in or from the UK.

4 Institution-wide strategies should be put in place to embed internationalism and its benefits across all parts of the organisation.

Meeting the needs of international students:

If the UK is able to respond successfully to all the above implications, all students (international and domestic) will benefit significantly. They will have access to a greater range of programmes that are better resourced, offered through a wider and more flexible mix of delivery modes and at the world's leading level of quality.

Appendix A:
References

Statistics

Australian Education International, 2002, *Overseas Student Statistics 2000*, Ausinfo, Canberra

Australian Education International, 2004, *Final International Student Numbers 2003*. Available at http://aei.dest.gov.au/general/stats/StudentVisaData/RecentAnnualData/RecentData.htm

Canadian Bureau for International Education (CBIE), 2002, *The National Report on International Students in Canada, 2000/01*, CBIE

Canadian Bureau for International Education (CBIE), 2000, *The National Report on International Students in Canada*, 1998/99, CBIE

Davis, T.M., 2003, *Atlas of Student Mobility*, Institute of International Education

Department of Education, Science and Training, Australia, 2002, *Higher Education Statistics Collection 2001 and 2002*, www.dest.gov.au [Customised data file]

Higher Education Statistics Agency (HESA), UK, 2002, *Students in UK Higher Education Institutions 2001/2*, HESA [Customised data file]

Higher Education Statistics Agency (HESA), UK, 2003, *Students in UK Higher Education Institutions 2002/3*, HESA [Customised data file]

IDP Education Australia, 2002a and 2002b, *International Students in Australian Universities, Semester 1 and 2, 2002*, www.idp.com (unpublished)

IDP Education Australia, 2003a and 2003b, *International Students in Australian Universities, Semester 1 and 2*, 2003, www.idp.com (unpublished)

Institute of International Education (IIE), 2002, *Open Doors 2002, Report on International Educational Exchange*, IIE

Institute of International Education (IIE), 2003, *Open Doors 2003, Report on International Educational Exchange*, IIE

Ministry of Education (MOE), New Zealand, 2001, *Foreign Fee-Paying Students in New Zealand: Trends*. Available on Ministry of Education website at www.minedu.govt.nz/index.cfm?layout=document&documentid=7641&indexid=6671&indexparentid=6663

Ministry of Education (MOE), New Zealand, 2003, *Tertiary Statistics*, Available on Ministry of Education website at www.minedu.govt.nz/index.cfm?layout=index&indexid=1051&indexparentid=1028

UNESCO, 1998, *UNESCO Statistical Yearbook 1998*, UNESCO Publishing/Bernan Press

UNESCO, 2001, *World Education Report 2000 – Education Indicators*, Available from the UNESCO website, www.unesco.org/education/information/wer/htmlENG/tablesmenu.htm

UNESCO Institute for Statistics, 2002, *Education Statistics*, www.uis.unesco.org/ev.php?URL_ID=5187&URL_DO=DO_TOPIC&URL_SECTION=201

UKCOSA: Council for International Education, 2003, *Higher Education Statistics*, Available on UKCOSA website at www.ukcosa.org.uk/pages/hestats.htm

International education research

Australian Education International (AEI), 2001, *Positioning Australian Education and Training into the Future: A report on the Findings of Australian Education and Training Offshore*, Department of Education, Science and Training, Canberra, Australia

Bohm, A., and King, R., 1999, *Positioning Australian Institutions for the Future: An analysis of the international education markets in the People's Republic of China*, IDP Education Australia

Bohm, A., and Chaudhri, D., 2000, *Securing Australia's Future: An Analysis of the International Education Markets in India*

British Council, 1999, *The Brand Report*, available at www.britishcouncil.org/ecs/report199909/summary.htm

Doorbar, A. and Associates, 2001, *The Asian Student of 2000*, EduWorld

IDP Education Australia, 2001, *Transnational Education: Australia Online: Critical Factors for Success*

IDP Education Australia (IDP) and Australian Education International (AEI), 2001, *Comparative Costs of Higher Education Courses for International Students in Australia, New Zealand, the United Kingdom, Canada and the United States*.

IDP Education Australia, 2002, *Global Student Mobility 2025: Forecasts of the Global Demand for International Higher Education*

King, R., 2003, 'The Rise and Regulation of For-Profit Higher Education', *Observatory on Borderless Higher Education*, December 2003

Lawley, M. and Blight, D., 1998, *Reasons for Choice of an Overseas Study Destination*, IDP Education Australia

Planning and Research Branch, 2003, *Factors Influencing Student Choice of Australia as a Study Destination*, IDP Education Australia.

Reports used for the development of global scenarios:

Auer, P. and Fortuny, M., 2000, *Employment Paper 2000/02: Ageing of the Labour Force in OECD Countries: Economic and Social Consequences*, Employment Sector, International Labour Office, Geneva.

Barland, J., Dawkins, P., Johnson, D. and Williams, R., 2000, *Returns on Investment in Higher Education*, University of Melbourne, Melbourne.

Citizenship and Immigration Canada, available at www.cic.gc.ca/english/index.html

Cobb-Clark, D. and Chapman, B.J., 1999, *The Changing Patterns of Immigrants Labour Market Experiences*, Department of Immigration Multicultural and Indigenous Affairs, Canberra.

Commonwealth of Australia's Department of Employment and Workplace Relations, 2003, *National and State Skill Shortages Lists*, Australia, 2003.

Department of Labour of New Zealand, 2001, *Occupational Trends in New Zealand 1991–2001*.

European Commision, Eurostat, 2001, *Long-term Migration Scenarios for the European Economic Area*, Office for Official Publications of the European Communities, Luxembourg.

European Commision, Eurostat, 2003, *National and Regional Trends in the Labour Force in the European Union 1985–2050*, Office for Official Publications of the European Communities, Luxembourg.

Feridhanusetyawan, T. and Stahl, C., 1999, *The Impact of Trade Liberalisation on Labour Markets in the Asia Pacific Region*, Centre for International Studies, Jakarta and Centre for Asia Pacific Social Transformation Studies, University of Newcastle, Australia.

Findlay, A., 2001, 'From Brain Gain to Brain Gain: Policy Implications for the UK of Recent Trends in Skilled Migration from Developing Countries', *International Migration Papers*, International Migration Branch, International Labour Office, Geneva.

Guest, R. and McDonald, I., 2002, *Prospective Demographic Change and Australia's Policy Agenda for the 21st Century*, School of Accounting and Finance, Griffith University, Australia and National Australian Bank Professor of Economics, University of Melbourne.

International Labour Organization, January 2003, *Global Employment Trends*, International Labour Office, Geneva.

Kent, M. and Mather, M., December 2002, *What Drives U.S. Population Growth?*, US Population Reference Bureau.

Lewis, P.E.T., 2002, 'The New Economy and the Demand for Skills', *Discussion Paper Series 01/2*, The Centre for Labour Market Research, Murdoch University.

Lowel, B.L. and Findlay, A.M., October 2001, *Migration of Highly Skilled Persons from Developing Countries: Impacts and Policy Responses, Synthesis Report*, Report prepared for International Labour Office, Geneva, Department for International Development, United Kingdom.

Lowell, B.L., 2002, *Skilled Temporary and Permanent Immigrants into the United States*, Metropolis Project, Vancouver Centre of Excellence, Vancouver.

Lowell, B.L., 2001, *Some Developmental Effects on the International Migration of High Skilled Persons*, International Migration Branch, International Labour Office, Geneva.

Martin, P. and Midgley, E., June 2003, *Immigration: Shaping and reshaping America*, US' Population Reference Bureau, Washington.

McDonald, P., 2002, *The Ageing Population in Australia: Demographic Projections and the Case for a Population Policy*, Demography and Sociology Program, Research School of Social Sciences, Australian National University.

Martin, P., 2003, *Sustainable Migration Policies in a Globalising World*, International Institute for Labour Studies, Geneva.

New Zealand Immigration Service, available at www.immigration.govt.nz/

OECD, 2003, *Migration and the Labour Market in Asia-Recent Trends and Policies*, Japan institute of Labour, Japan.

OECD, 2002, *Measuring the Information Economy*.

Scetagne, S., 1971, *Building Bridges Across Generations in the Workplace – A response to the Ageing of the Workforce*, Canadian Council on Social Development, Vancouver.

UK's National Statistics, 2003, *Labour Market Trends*, Report Volume 111, Number 8, August 2003.

UK's Immigration and Nationality Directorate, available at www.ind.homeoffice.gov.uk

US' Bureau of Citizenship and Immigration Services, available at www.immigration.gov

United Nations, 2002, International Migration 2002, Department of Economic and Social Affairs, New York.

United Nations, 2000, *World Population Prospects: The 2000 Review*, Population Division of the Department of Economic and Social Affairs, United Nations, New York.

Wickramasekera, P., 2000, 'Asian Labour Migration: Issues and Challenges in the Era of Globalization', *International Migration Papers*, International Migration Programme, International Labour Office, Geneva.

Other documents and articles

UK's Prime Minister Initiative, available at www.britishcouncil.org/promotion/pmi.htm

The Higher Education Supplement, 2003, "Coalition Rallies for Fight", 5/9/2003, available at www.thes.co.uk/current_edition/story.asp?fksp=1&id=48131

European Union Web site, available at www.europa.eu.int and EU at a Glance, available at www.europa.eu.int/abc/index_en.htm#

The Observatory on Borderless Higher Education, 2002, Survey of 2002 Breaking News, available at www.obhe.ac.uk/products/reports/pdf/April2003.pdf

The Observatory on Borderless Higher Education, 2003, "China announces signing of new regulations on foreign providers and Nottingham University opens first international branch campus in China", Breaking News Article, 11th April 2003.

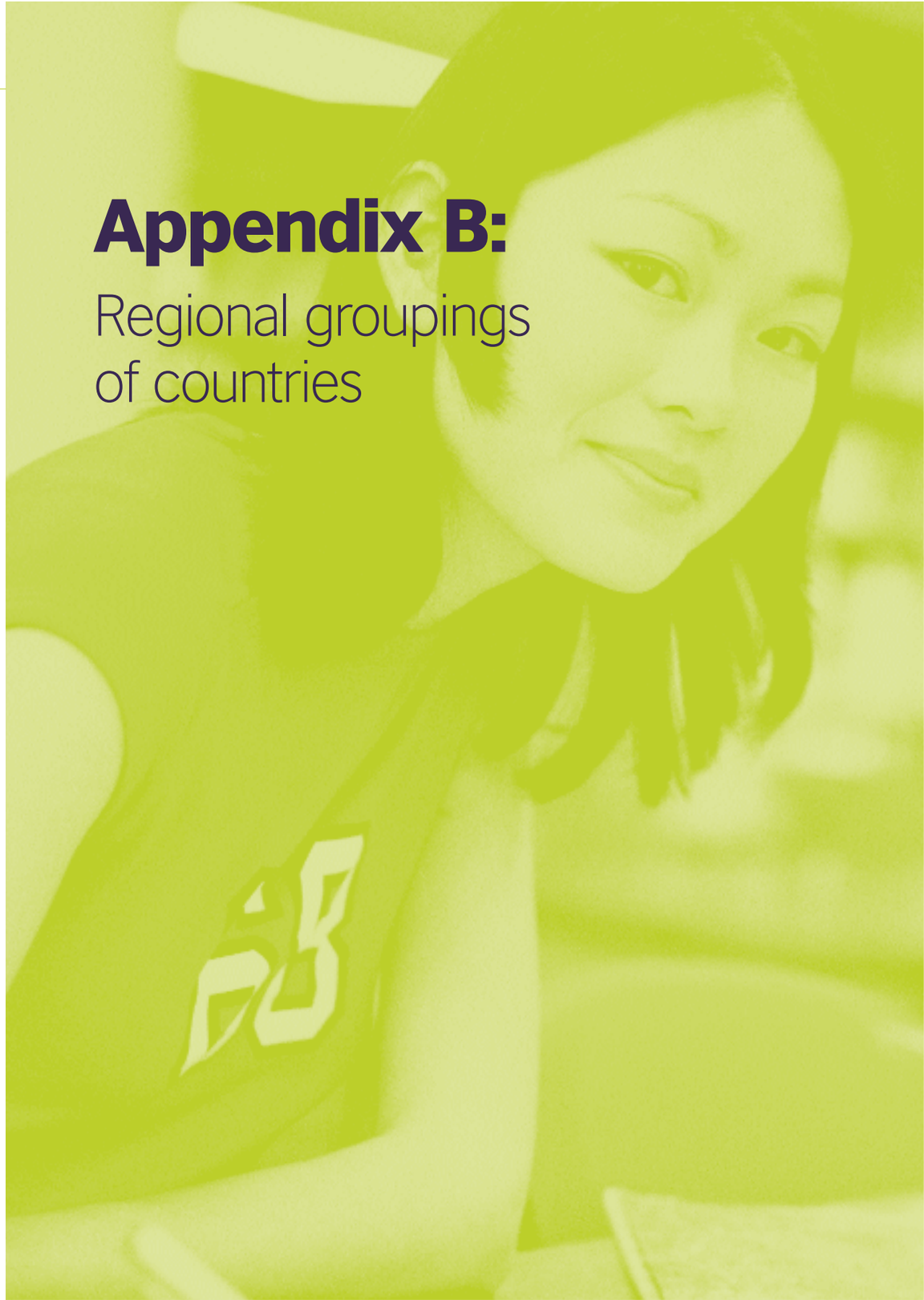
Skilled migration into the UK, available at www.ind.homeoffice.gov.uk/default.asp?pageid=2769 and www.ind.homeoffice.gov.uk/default.asp?pageID=2757

Student visas programme into the UK, available at www.ind.homeoffice.gov.uk/default.asp?pageid=737

Visa programmes into the UK, available at www.ukvisas.gov.uk

Quality assurance arrangements including in transnational education, available at www.qaa.ac.uk

Higher Education Policy Institute (HEPI), 2003, *Demand for UK Higher Education to 2010: Some Political and Policy Implications*. HEPI Report Summary 4. Available at www.hepi.ac.uk/articles/docs/hedemand.doc



Appendix B:

Regional groupings of countries

Appendix C:

Top 20 source countries in 2003 for UK, USA and Australia

Sub-Saharan Africa
Benin
Botswana
Burkina
Chad
Comoros
Cote d'Ivoire
Djibouti
Eritrea
Ethiopia
Gabon
Gambia
Ghana
Guinea
Kenya
Lesotho
Madagascar
Malawi
Mali
Mauritania
Mauritius
Mozambique
Namibia
Nigeria
Senegal
South Africa
Swaziland
Tanzania
Togo
Uganda
Zambia
Zimbabwe

North Africa
Algeria
Egypt
Libya
Morocco
Tunisia

Central Asia
Armenia
Azerbaijan
Kazakhstan
Kyrgystan
Tajikistan
Uzbekistan

East Asia
China
Hong Kong
Japan
South Korea
Macau
Mongolia
Taiwan

South East Asia
Brunei
Cambodia
Indonesia
Laos
Malaysia
Myanmar
Philippines
Singapore
Thailand
Vietnam

South Asia
Bangladesh
India
Nepal
Pakistan
Sri Lanka

Middle East
Iran
Iraq
Israel
Jordan
Kuwait
Lebanon
Oman
Qatar
Saudi Arabia
Syria
United Arab Emirates
Yemen

Eastern Europe
Albania
Belarus
Bulgaria
Croatia
Cyprus
Czech Republic
Estonia
Georgia
Hungary
Latvia
Lithuania
Macedonia
Malta
Moldova
Poland
Romania
Russia
Slovakia
Slovenia
Turkey
Ukraine
Yugoslavia

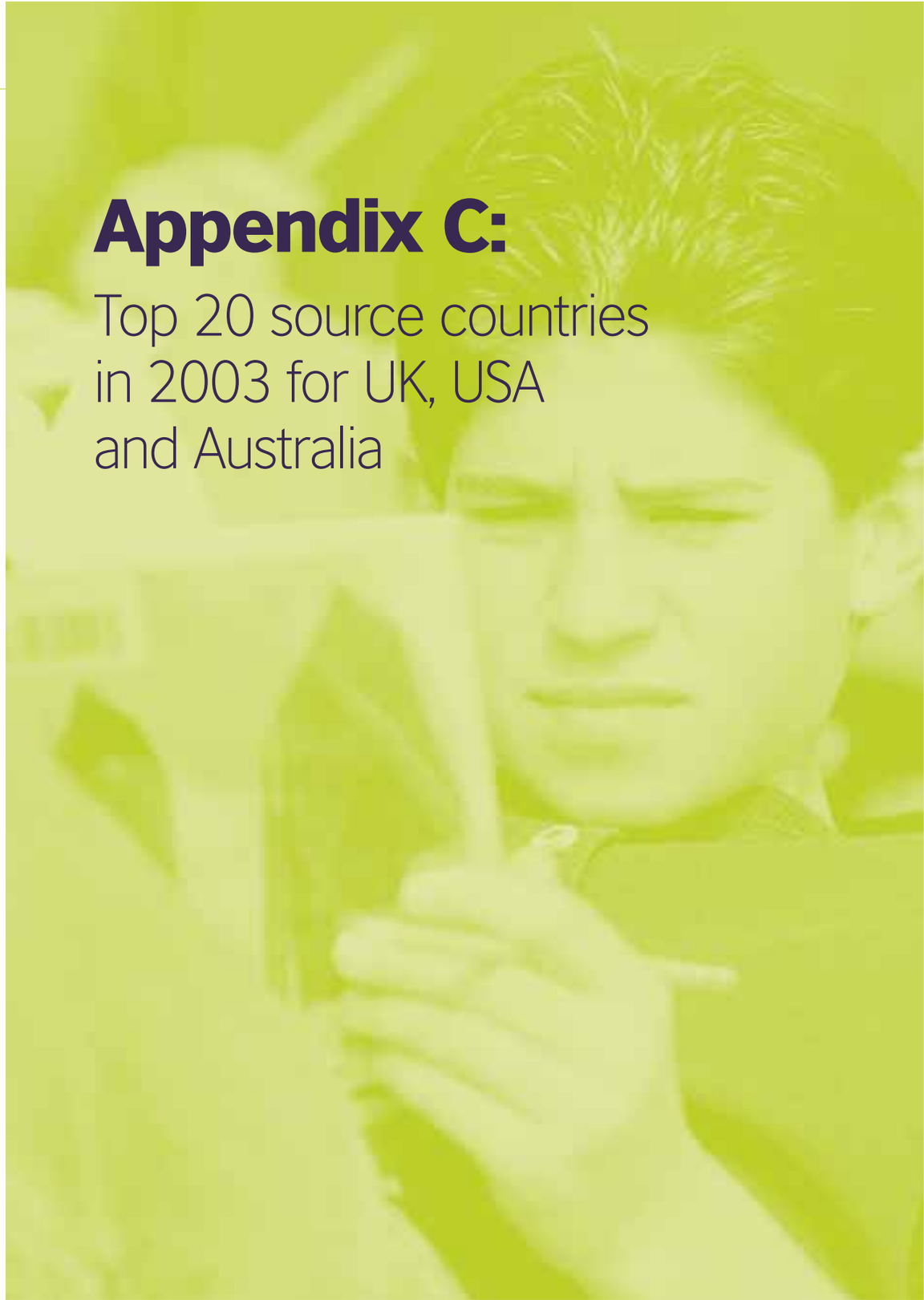
Western Europe
Austria
Belgium
Denmark
Finland
France
Germany
Greece
Iceland
Ireland
Italy
Luxembourg
Netherlands
Norway
Portugal
Spain
Sweden
Switzerland
United Kingdom (UK)

Oceania
Australia
Fiji
New Zealand
Papua New Guinea

Central America
Bahamas
Barbados
Costa Rica
Cuba
Dominican Republic
El Salvador
Guatemala
Honduras
Jamaica
Nicaragua
Panama
Trinidad

North America
Canada
Mexico
United States of America (USA)

South America
Argentina
Brazil
Chile
Colombia
Guyana
Paraguay
Peru
Uruguay
Venezuela



UNITED KINGDOM			UNITED STATES			AUSTRALIA		
Rank	Country	No. of students	Rank	Country	No. of students	Rank	Country	No. of students
1	China	32,000	1	India	74,603	1	China	16,780
2	Greece	24,200	2	China	64,757	2	Malaysia	12,200
3	USA	14,350	3	South Korea	51,519	3	Hong Kong	9,480
4	Germany	13,750	4	Japan	45,960	4	Indonesia	8,890
5	France	13,000	5	Taiwan	28,017	5	Singapore	8,690
6	Irish Republic	12,700	6	Canada	26,513	6	India	8,380
7	India	10,900	7	Mexico	12,801	7	USA	5,530
8	Malaysia	10,200	8	Turkey	11,601	8	Thailand	4,170
9	Hong Kong*	9,700	9	Indonesia	10,432	9	Norway	3,260
10	Spain	7,600	10	Thailand	9,982	10	South Korea	3,130
11	Gulf States**	6,450	11	Germany	9,302	11	Taiwan	2,860
12	Japan	6,150	12	Brazil	8,388	12	Japan	2,644
13	Italy	6,050	13	UK	8,326	13	Vietnam	1,930
14	Taiwan	4,900	14	Pakistan	8,123	14	Bangladesh	1,920
15	Singapore	4,150	15	Hong Kong	8,076	15	Sri Lanka	1,720
16	Nigeria	4,100	16	Kenya	7,862	16	Canada	1,695
17	Sweden	3,750	17	Colombia	7,771	17	Germany	1,625
18	Cyprus	3,750	18	France	7,223	18	UK	1,540
19	Canada	3,650	19	Malaysia	6,595	19	Sweden	1,405
20	Norway	3,600	20	Russia	6,238	20	Kenya	895

Actual numbers from HESA data, not global forecasting model projections
** Hong Kong data presented separately for historical comparison purposes*
*** Includes Saudi Arabia*

Appendix D:

Base data for the global forecasting model

For explanations refer to chapter 2

Country	Population	GNP per capita	Number of HE students	Number of students in overseas HE	Students per 100,000 population	International HE access ratio
Albania	3,154,079	744	34,285	1,913	1,087	5.6
Algeria	28,705,078	1,524	355,369	22,252	1,238	6.3
Argentina	35,213,228	8,589	1,097,596	4,520	3,117	0.4
Armenia	3,551,000	627	35,368	2,721	996	7.7
Australia	8,115,613	20,166	1,029,329	5,398	5,682	0.5
Austria	8,042,701	27,644	240,316	10,681	2,988	4.4
Azerbaijan	7,573,835	607	114,592	4,612	1,513	4.0
Bahamas	307,000	10,000	5,305	3,183	1,728	60.0
Bangladesh	120,718,504	348	657,002	5,883	544	0.9
Barbados	265,672	6,575	6,735	882	2,535	13.1
Belarus	10,340,659	2,287	327,592	7,194	3,168	2.2
Belgium	10,096,710	26,387	358,534	8,249	3,551	2.3
Benin	5,481,013	374	14,031	1,914	256	13.6
Botswana	1,500,487	3,268	8,808	1,663	587	18.9
Brazil	161,280,788	4,701	2,296,638	12,498	1,424	0.5
Brunei	300,195	25,090	1,549	1,258	516	81.2
Bulgaria	8,435,176	1,194	262,334	6,227	3,110	2.4
Burkina Faso	10,701,362	248	8,882	1,188	83	13.4
Cambodia	10,192,607	292	8,664	1,595	85	18.4
Canada	29,902,174	19,484	1,780,076	30,010	5,953	1.7
Chad	6,879,612	228	3,509	621	51	17.7
Chile	14,394,685	4,530	366,489	4,895	2,546	1.3
China	1,230,664,688	782	5,821,044	120,276	473	2.1
Colombia	39,257,843	2,125	643,829	6,205	1,640	1.0
Comoros	622,568	413	355	612	57	172.5
Costa Rica	3,638,835	2,620	102,979	1,175	2,830	1.1
Côte d'Ivoire	13,694,255	704	77,783	3,849	568	4.9
Croatia	4,488,488	3,953	85,775	4,889	1,911	5.7
Cuba	1,001,988	1,928	111,450	611	1,013	0.5
Cyprus	750,246	14,930	8,950	8,909	1,193	99.5
Czech Republic	10,301,000	5,256	206,947	2,876	2,009	1.4
Denmark	5,240,279	34,039	175,497	5,747	3,349	3.3
Dijbouti	601,365	804	156	834	26	533.4
Dominican Republic	7,946,026	1,691	176,640	97	2,223	0.6
Egypt	63,461,765	1,167	1,202,600	9,782	1,895	0.8
El Salvador	5,789,422	1,749	112,025	968	1,935	0.9
Eritrea	3,349,268	224	3,014	364	90	12.1
Estonia	1,464,575	3,457	43,425	2,445	2,965	5.6
Ethiopia	56,632,296	108	41,908	4,361	74	10.4
Fiji	801,000	2,460	6,064	628	757	10.4
Finland	5,120,518	24,569	226,224	6,731	4,418	3.0
France	58,239,044	26,040	2,062,245	39,049	3,541	1.9
Gabon	1,106,031	4,124	7,178	1,775	649	24.7
Gambia	1,146,577	342	1,697	631	148	37.2
Georgia	5,167,508	1,011	162,725	7,699	3,149	4.7
Germany	81,648,756	28,083	2,125,317	49,728	2,603	2.3
Ghana	19,708,000	390	23,126	4,625	117	20.0
Greece	10,516,418	11,525	330,005	54,064	3,138	16.4
Guatemala	10,242,454	1,557	82,349	982	804	1.2
Guinea	7,077,295	536	7,927	1,28	112	16.2
Guyana	836,310	709	7,995	634	956	7.9
Honduras	5,806,796	733	57,197	1,031	985	1.8
Hong Kong	6,389,598	24,395	116,234	37,265	1,819	32.1
Hungary	10,186,560	4,501	193,850	5,207	1,903	2.7
Iceland	271,287	26,265	7,916	2,211	2,918	27.9
India	949,108,055	355	6,055,309	41,276	638	0.7
Indonesia	200,374,384	1,048	2,318,332	24,184	1,157	1.0
Iran	63,360,784	1,747	1,117,051	26,219	1,763	2.3
Iraq	22,796,510	1,780	271,508	2,71	1,191	1.0
Ireland	3,636,183	16,847	134,611	20,053	3,702	14.9
Israel	5,672,798	15,770	202,576	9,830	3,571	4.9
Italy	57,319,680	19,970	1,890,976	34,373	3,299	1.8
Jamaica	2,493,558	1,538	19,151	3,596	768	18.8
Japan	125,661,017	37,633	3,934,446	64,842	3,131	1.6
Jordan	5,884,726	1,479	112,959	14,286	1,920	12.6
Kazakhstan	16,422,267	1,458	469,513	15,491	2,859	3.3
Kenya	28,686,607	340	61,526	15,382	214	25.0
Korea, Republic of	45,323,092	9,953	2,767,428	72,018	6,106	2.6
Kuwait	1,785,567	19,750	31,247	4,824	1,750	15.4
Kyrgystan	4,586,892	532	49,905	3,150	1,088	6.3
Laos	4,894,942	385	12,727	1,089	260	8.6
Latvia	2,490,891	2,621	55,995	1,494	2,248	2.7
Lebanon	3,051,456	3,194	82,755	10,180	2,712	12.3
Lesotho	1,970,674	663	4,611	639	234	13.9
Libya	5,171,550	500	308,474	1,897	5,965	0.6
Lithuania	3,708,709	2,433	83,483	2,102	2,251	2.5
Luxembourg	411,649	43,270	2,635	5,103	640	193.7
Macau	438,169	26,000	7,453	684	1,701	9.2
Madagascar	14,152,953	254	26,608	3,529	188	13.3
Malawi	9,957,468	208	5,775	788	58	13.6
Malaysia	20,511,241	4,282	214,958	52,566	1,048	24.5
Mali	10,191,406	259	13,656	1,664	134	12.2
Malta	376,855	9,058	8,227	517	2,183	6.3

Country	Population	GNP per capita	Number of HE students	Number of students in overseas HE	Students per 100,000 population	International HE access ratio
Mauritania	2,393,969	433	8,738	1,923	365	22.0
Mauritius	1,121,782	3,732	7,090	2,283	632	32.2
Mexico	92,613,949	3,693	1,610,557	11,817	1,739	0.7
Moldova	4,376,000	516	93,778	8,151	2,143	8.7
Mongolia	2,487,255	396	43,950	1,664	1,767	3.8
Morocco	26,440,511	1,257	308,561	36,180	1,167	11.7
Mozambique	17,767,823	136	7,107	1,486	40	20.9
Myanmar	43,415,020	378	256,149	729	590	0.3
Namibia	1,579,357	2,087	11,608	2,470	735	21.3
Nepal	21,771,707	215	105,593	2,197	485	2.1
Netherlands	15,520,875	25,348	468,420	13,035	3,018	2.8
New Zealand	3,701,772	15,642	166,987	1,633	4,511	1.0
Nicuragua	4,547,133	404	54,975	1,225	1,209	2.2
Nigeria	101,265,107	278	1,074,402	6,176	1,061	0.6
Norway	4,374,129	34,778	185,419	7,253	4,239	3.9
Oman	2,222,758	3,722	15,448	2,644	695	17.1
Pakistan	140,259,981	490	502,282	11,018	358	2.2
Panama	2,673,870	2,990	80,885	1,626	3,025	2.0
Papua New Guinea	4,397,849	907	13,985	635	318	4.5
Paraguay	4,954,236	2,000	46,966	1,993	948	4.2
Peru	23,936,149	2,495	782,233	8,401	3,268	1.1
Philippines	69,755,859	1,181	2,063,378	5,000	2,958	0.2
Poland	38,615,768	3,445	720,184	13,037	1,865	1.8
Portugal	9,864,000	10,794	319,791	7,519	3,242	2.4
Qatar	556,207	11,585	8,443	947	1,518	11.2
Romania	22,639,558	1,411	411,814	6,826	1,819	1.7
Russia	147,803,804	2,910	4,442,982	20,995	3,006	0.5
Saudi Arabia	18,948,444	7,333	275,700	7,550	1,455	2.7
Senegal	8,549,708	540	25,393	4,824	297	19.0
Singapore	3,366,405	30,750	91,903	22,970	2,730	25.0
Slovakia	5,355,932	3,669	101,602	2,015	1,897	2.0
Slovenia	1,983,101	9,443	52,691	1,102	2,657	2.1
South Africa	38,037,291	3,216	700,267	3,760	1,841	0.5
Spain	39,573,427	14,304	1,683,454	25,056	4,254	1.5
Sri Lanka	18,093,069	769	85,761	5,060	474	5.9
Swaziland	898,058	1,529	5,658	615	630	10.9
Sweden	8,811,940	26,158	274,580	10,661	3,116	3.9
Switzerland	7,192,460	43,276	149,028	7,832	2,072	5.3
Syria	14,555,015	1,084	226,913	14,969	1,559	6.6
Tajikistan	5,831,693	393	110,511	1,447	1,895	1.3
Taiwan	21,471,000	13,260	678,553	40,000	3,160	5.9
Tanzania	30,501,942	208	17,386	2,569	57	14.8

Country	Population	GNP per capita	Number of HE students	Number of students in overseas HE	Students per 100,000 population	International HE access ratio
Thailand	59,144,554	2,587	1,331,935	17,988	2,252	1.4
Togo	4,163,265	344	13,114	1,812	315	13.8
Tunisia	9,048,134	2,069	121,335	10,380	1,341	8.6
Turkey	62,281,925	3,060	1,433,107	41,963	2,301	2.9
Uganda	19,455,253	316	34,825	1,571	179	4.5
Ukraine	51,164,329	1,190	1,532,883	21,884	2,996	1.4
United Arab Emirates	2,246,349	14,467	17,993	3,554	801	19.8
United Kingdom	58,427,14	20,481	1,891,287	24,778	3,237	1.3
United States	269,081,188	28,594	14,371,626	30,049	5,341	0.2
Uruguay	3,242,304	5,923	79,696	2,232	2,458	2.8
Uzbekistan	22,801,57	1,081	805,709	10,380	3,534	1.3
Venezuela	24,170,000	3,480	668,109	6,974	2,764	1.0
Vietnam	74,889,216	292	507,749	6,751	678	1.3
Yemen	15,514,286	274	65,005	6,060	419	9.3
Yugoslavia	10,554,121	1,928	171,504	10,875	1,625	6.3
Zambia	8,375,610	373	19,934	1,412	238	7.1
Zimbabwe	11,005,888	725	72,749	5,311	661	7.3

Appendix E:

Forecast of demand for international students in higher education in the UK – base scenario for 2005–20

	Country	2005	2010	2015	2020
1	China	26,800	49,100	82,400	130,900
2	Greece	28,000	30,900	23,900	34,800
3	India	8,600	16,500	23,000	29,800
4	Malaysia	10,100	14,700	20,900	28,400
5	Ireland	12,800	14,800	16,500	17,900
6	USA	13,100	14,300	15,400	16,600
7	Germany	13,100	14,400	15,200	15,600
8	France	12,400	13,200	14,000	14,700
9	Hong Kong	9,100	10,600	12,300	14,000
10	Pakistan	2,800	4,800	7,400	11,100
11	Italy	6,000	6,300	6,600	9,800
12	Spain	7,500	8,000	8,400	8,800
13	Nigeria	2,800	4,000	5,600	7,600
14	Taiwan	4,700	5,500	6,400	7,300
15	Japan	6,000	6,300	6,500	6,600
16	Cyprus	4,200	4,900	5,600	6,400
17	Thailand	3,000	3,800	5,100	6,400
18	Singapore	4,200	4,900	5,300	5,800
19	South Korea	2,800	3,300	4,000	5,600
20	Sri Lanka	1,800	2,600	3,800	5,400
21	Kenya	2,800	3,500	4,300	5,200
22	Mauritius	1,900	2,700	3,800	5,000
23	Bangladesh	1,000	2,000	3,300	4,500
24	Canada	3,400	3,800	4,200	4,500
25	Norway	3,700	3,900	4,000	4,300
26	Oman	1,800	2,400	3,200	4,200
27	Sweden	3,800	4,000	4,100	4,200
28	Zimbabwe	1,600	2,100	2,600	3,300
29	Turkey	1,600	2,000	2,600	3,200
30	Indonesia	1,100	1,600	2,200	3,100
31	Saudi Arabia	1,500	1,900	2,500	3,100
32	Uganda	800	1,100	1,800	3,100
33	Mexico	1,700	2,100	2,500	3,000
34	Portugal	2,300	2,500	2,700	2,900
35	Ghana	1,400	1,800	2,300	2,800
36	Netherlands	2,300	2,500	2,600	2,800
37	Belgium	2,400	2,500	2,600	2,700
38	Finland	2,300	2,400	2,500	2,600
39	Botswana	800	1,300	1,800	2,500
40	Israel	1,700	1,900	2,200	2,400
41	Russia	1,600	1,900	2,200	2,400
42	UAE	1,100	1,500	1,800	2,200
43	Brazil	1,200	1,400	1,700	2,100
44	Iran	1,100	1,400	1,700	2,100
45	Tanzania	900	1,300	1,600	2,100
46	Libya	1,100	1,400	1,700	2,000
47	Australia	1,400	1,500	1,700	1,900
48	Denmark	1,700	1,800	1,800	1,900
49	Jordan	1,000	1,200	1,500	1,900
50	Egypt	900	1,100	1,400	1,700
51	Nepal	200	500	900	1,600
52	Switzerland	1,300	1,400	1,500	1,600

	Country	2005	2010	2015	2020
53	Brunei	700	900	1,200	1,500
54	Austria	1,200	1,300	1,300	1,400
55	South Africa	1,100	1,200	1,300	1,400
56	Luxembourg	800	900	1,100	1,300
57	Vietnam	300	500	1,000	1,300
58	Poland	80	900	1,100	1,200
59	Jamaica	500	700	900	1,100
60	Kuwait	600	700	900	1,100
61	Trinidad	600	800	900	1,100
62	Zambia	500	600	900	1,100
63	Romania	500	700	900	1,000
64	Bulgaria	400	500	600	700
65	Colombia	400	500	600	700
66	Czech Republic	400	500	600	700
67	Hungary	400	500	600	700
68	Malawi	300	400	600	700
69	Mozambique	100	200	400	700
70	Philippines	300	400	500	700
71	Ukraine	400	500	600	700
72	Algeria	300	400	500	600
73	Argentina	400	500	600	600
74	Ethiopia	200	300	400	600
75	Malta	400	500	500	600
76	New Zealand	400	500	500	600
77	Gambia	200	300	400	500
78	Lebanon	300	400	500	500
79	Qatar	300	300	400	500
80	Syria	300	300	400	500
81	Yemen	100	200	300	500
82	Yugoslavia	300	400	400	500
83	Albania	100	200	300	400
84	Barbados	200	300	300	400
85	Chile	300	300	400	400
86	Kazakhstan	200	300	300	400
87	Peru	200	300	300	400
88	Venezuela	300	300	400	400
89	Bahamas	100	200	200	300
90	Eritrea	100	200	200	300
91	Iceland	200	200	200	300
92	Myanmar	100	100	200	300
93	Uzbekistan	100	200	200	300
94	Croatia	100	200	200	200
95	Latvia	100	100	200	200
96	Lithuania	100	100	200	200
97	Morocco	100	200	200	200
98	Namibia	100	100	100	200
99	Slovakia	100	200	200	200
100	Slovenia	100	100	200	200
101	Armenia	50	60	90	100
102	Azerbaijan	80	100	100	100
103	Belarus	80	100	100	100
104	Cambodia	30	50	70	100

	Country	2005	2010	2015	2020
105	Côte d'Ivoire	80	100	100	100
106	Estonia	100	100	100	100
107	Georgia	70	90	100	100
108	Guyana	80	90	100	100
109	Iraq	70	80	100	100
110	Kyrgystan	40	50	80	100
111	Macau	80	100	100	100
112	Macedonia	60	80	100	100
113	Moldova	60	80	90	100
114	Mongolia	60	80	100	100
115	Swaziland	60	70	80	100
116	Tunisia	50	70	60	100
117	Laos	20	40	60	90
118	Uruguay	50	60	60	80
119	Salvador	40	50	60	70
120	Nicaragua	20	30	50	70
121	Papua New Guinea	50	50	60	70
122	Senegal	30	40	60	70
123	Tajikistan	30	40	50	70
124	Costa Rica	40	40	50	60
125	Lesotho	60	60	60	60
126	Madagascar	30	40	40	60
127	Mauritania	20	30	40	60
128	Panama	40	40	50	60
129	Dominican Republic	20	30	40	50
130	Fiji	30	40	40	50
131	Guatemala	20	20	40	50
132	Paraguay	20	30	40	50
133	Burkina	10	20	30	40
134	Benin	10	10	20	30
135	Cuba	20	20	30	30
136	Gabon	20	20	20	30
137	Mali	10	20	20	30
138	Guinea	10	10	20	20
139	Honduras	10	20	20	20
140	Togo	10	10	20	20
141	Chad	10	10	10	10
142	Djibouti	10	10	10	10

British Council

10 Spring Gardens
London SW1A 2BN

T +44 (0)20 7930 8466
F +44 (0)20 7389 6347

www.britishcouncil.org

Universities UK

Woburn House
20 Tavistock Square
London WC1H 9HQ

T +44 (0)20 7419 4111
F +44 (0)20 7388 8649

www.universitiesuk.org

IDP Education Australia

Level 4210, Clarence Street
Sydney, NSW 2000
Australia

T +61 2 8251 2700
F +61 2 8251 2728

www.idp.org