



# Measuring and benchmarking the internationalisation of education

London QE conference centre  
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# Introduction

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- Previous work on forecasting student mobility
- Rapid growth in student mobility – 1.9m foreign students enrolled worldwide in 2000, 3m in 2007 = 59% increase
- But not just students crossing borders

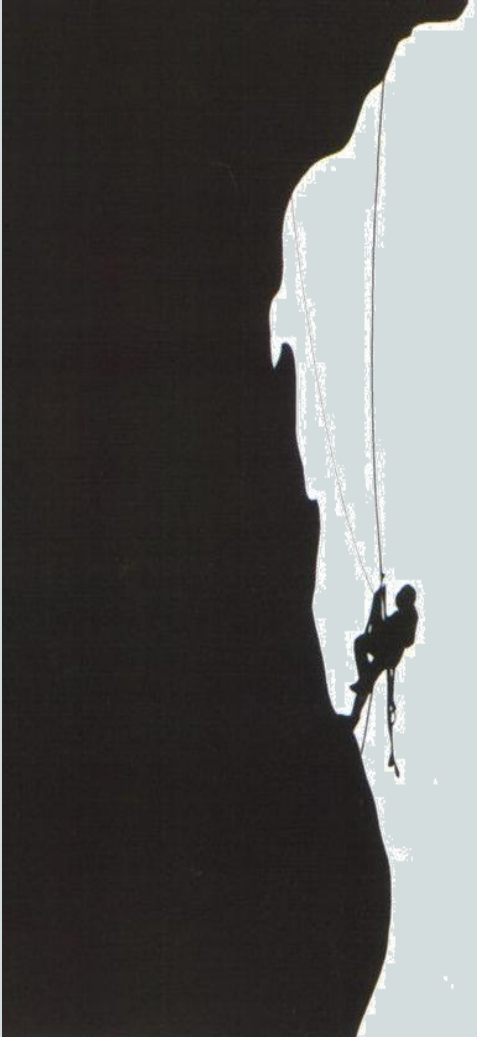


# Our approach

- Complex process – no single measure can capture
- Our approach: Three measures
  1. National Policy Index
  2. Student mobility rankings
  3. Transnational education & research collaboration indicators



# Objectives

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- Policy index. Develop an analytical framework to better understand and compare national policy frameworks
  - Student mobility. More comprehensive times series and cross country analysis including absolute and relative analysis
  - TNE & Research. Filling data gaps - expand existing datasets – develop analytical framework to eventually benchmark countries
- For use by government departments, policy makers and HE institutions

# National policy index

➤ Examine the national policy frameworks in place to engage with the internationalisation of education

➤ 11 study countries;

1. Australia
2. Brazil
3. China
4. Germany
5. India
6. Japan
7. Malaysia
8. Nigeria
9. Russia
10. UK
11. USA



# Structure



## 1. Openness

- a. Strategy,
- b. Visa & migration,
- c. Environment for institutions

## 2. Quality assurance and degree recognition

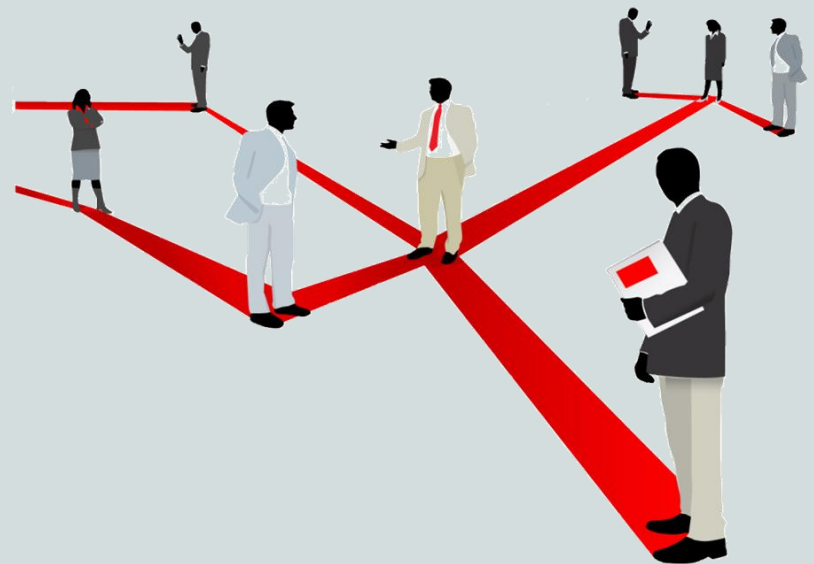
- a. Cross border quality assurance and accreditation,
- b. Recognition of foreign qualifications,
- c. Entry standards and quality of provision

## 3. Access and Equity

- a. Promotion of outbound mobility,
- b. Promotion of inbound mobility,
- c. Sustainable development policies

# Scoring system

- Each category is equally weighted and each indicator within category is equally weighted
- 29 qualitative and 4 quantitative
- Qualitative – Yes, Partly, No
- Quantitative – 6 scoring bands
- From both an importer and exporter perspective



Scores	Weight	Australia
Overall national policy score	1	8.0
Openness	0.33	8.5
International education strategy	0.33	8.4
Has the ministry of education (or equivalent) produced a detailed international higher education strategy (e.g. covering student mobility, academic collaboration, development goals)?	0.20	1.0
Is there a dedicated body (or bodies) promoting the internationalisation of higher education?	0.20	1.0
Number of countries in which the dedicated body/bodies responsible for promoting internationalisation of higher education has a local representative office	0.20	0.8
Over the past five years, has the government made efforts to sustain or increase the number of bilateral agreements/MoUs signed between itself and foreign education ministries on the topic of collaboration in higher education?	0.20	1.0
Number of bilateral mutual agreements/MoUs signed by the ministry of education (or equivalent) with other countries, on the collaboration in higher education	0.20	0.4
Visa and migration policy	0.33	7.0
Do restrictions exist on foreign students and researchers to obtaining entry visas, e.g. depending on country of origin?	0.20	0.5
Are procedures for foreign students and researchers to obtain visas clear, transparent and consistent?	0.20	1.0
Are there any special regulations in place to make it easier for foreign teaching faculty and researchers to gain employment?	0.20	0.5
Do policies exist to make it easier for foreign students and academics to come and live in the country, such as concerning employment, bringing spouses?	0.20	1.0
Do specific policies exist to allow foreign students and academics obtain an employment visa following completion of studies or teaching?	0.20	0.5
Regulatory environment for institutions	0.33	10.0
Can foreign institutions set up their own legally recognised teaching/research entities?	0.20	1.0
Are public domestic institutions permitted to set up legally recognised teaching/research entities abroad?	0.20	1.0
Are legal regulations for foreign institutions clear, transparent and evenly enforced?	0.20	1.0
Do regulations exist to allow for the provision of cross-border programmes by foreign providers, e.g. by way of twinning, programme articulations and distance learning?	0.20	1.0
Do public institutions have the authority to charge different fees to foreign students?	0.20	1.0



# Openness

OPENNESS			
Rank	Country	Score/10	
1	UK	8.7	
2	Australia	8.5	
3	Germany	8.1	
4	Malaysia	7.9	
5	US	7.2	
6	Japan	6.5	
7	China	6.4	
8	Nigeria	5.0	
9	Russia	4.0	
10	India	3.5	
11	Brazil	3.2	

- UK the most open policy environment
- Developed markets tend to have well defined strategies with dedicated bodies promoting their higher education abroad
- Developed markets also tend to have the most appealing environments for higher education institutions
- Most countries have fairly attractive visa & migration policies for students
- Less attractive are visa and migration policies for academics

# Quality assurance and degree recognition

## QUALITY ASSURANCE AND DEGREE RECOGNITION

Rank	Country	Score/10	
1	Australia	9.4	
2	Germany	8.9	
3	UK	8.3	
4	China	5.6	
= 5	Malaysia	5.0	
= 5	US	5.0	
7	Russia	4.4	
8	Nigeria	2.8	
= 9	India	2.2	
= 9	Japan	2.2	
11	Brazil	1.1	

- Australia comes top in this category
- Large variations across countries
- Japan and Malaysia—relatively weak on outbound quality assurance
- Only Australia and Malaysia get full marks for inbound quality assurance
- In general polices are better for recognising foreign qualifications
- Receiving countries place greater emphasis on entry and teaching standards

# Access & Equity

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- Germany comes top in this category
- Emerging markets place greater emphasis on increasing access
- Several export countries relatively weak on promoting outbound mobility
- Only Australia has policy to prevent displacement of local students
- Developing countries active in addressing brain drain
- Increasing prevalence of international development & capacity building programmes

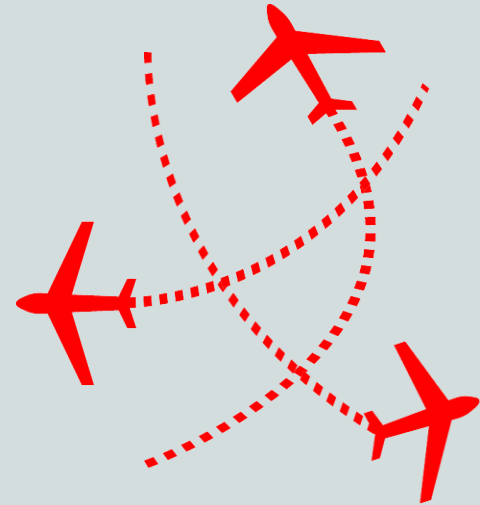
## Overall findings

OVERALL SCORE					
	Rank	Country	Score/10		
	1	Germany	8.4		
	2	Australia	8.0		
	3	UK	7.2		
	4	China	6.4		
	5	Malaysia	6.0		
	6	US	5.7		
	7	Japan	4.7		
	8	Russia	4.5		
	9	Nigeria	3.8		
=	10	Brazil	3.5		
=	10	India	3.5		

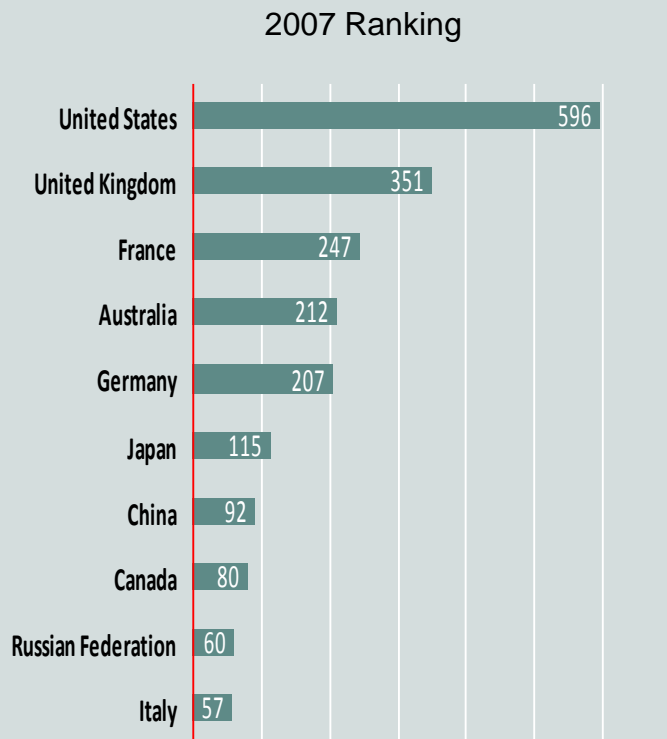
- Germany comes 1<sup>st</sup> with a well balanced policy framework and comes top in the “access and equity” category
- Australia comes 2<sup>nd</sup> with a strong “quality assurance” system
- The UK comes 3<sup>rd</sup> with the most “open” policy environment
- Brazil and India are joint bottom of the overall ranking

# Student mobility rankings

- Compare student mobility trends between 2003 & 2007
- Focus on both inbound and outbound mobility
- Relative measures so small countries are included
- Data source: OECD/UNESCO/National sources
- Data issues – Timeliness, Data gaps, Exchange etc



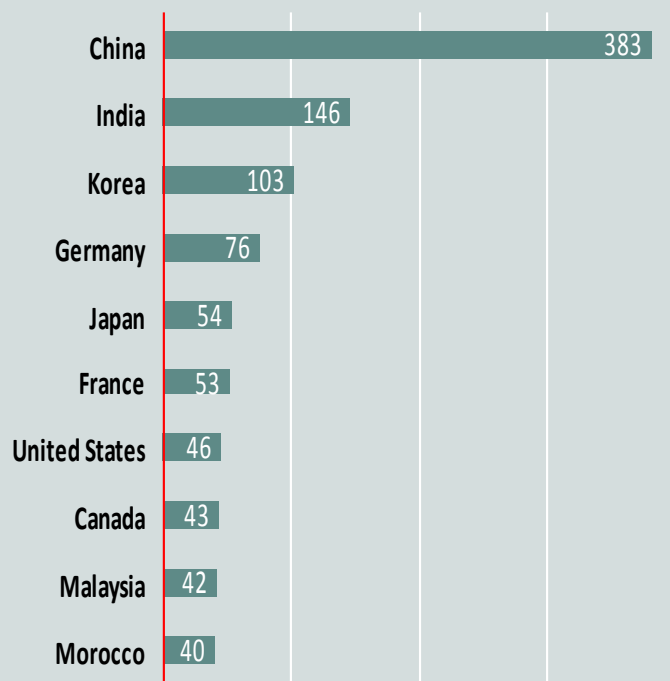
# Inward student flows



- The US, the UK and France ranked 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> respectively since 2004
- Five of the top ten countries in 2007 were European countries
- Large populous countries predominate
- US by far the main receiver but has remained stationary over the period
- UK, Australia and China fast growth – China to overtake Japan
- Russia only country to witness significant drop in international students

# Outbound student flows

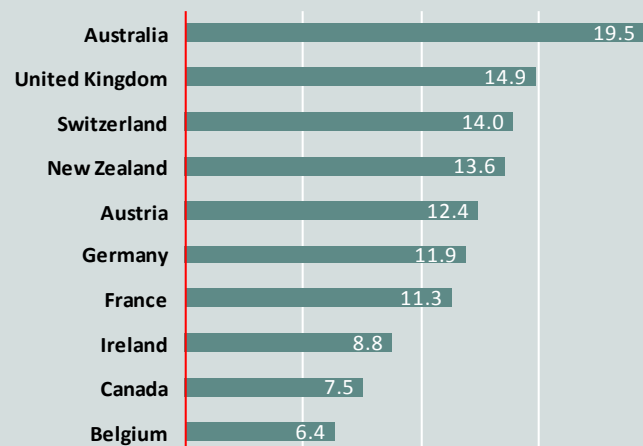
2007 Ranking



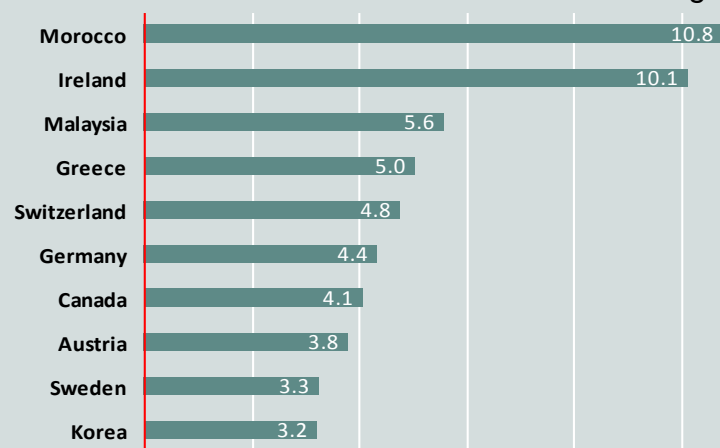
- China, India and Korea rank 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> respectively over the period
- Asia the geographical focus
- Six of the top ten countries also appeared in the inward students rankings
- Large populous counties predominate – Brazil and Russia not featured
- China by far the biggest sender in each year, although pace has slowed
- Germany fast growth since 2005

# International students % domestic students

Inward students - 2007 Rankings



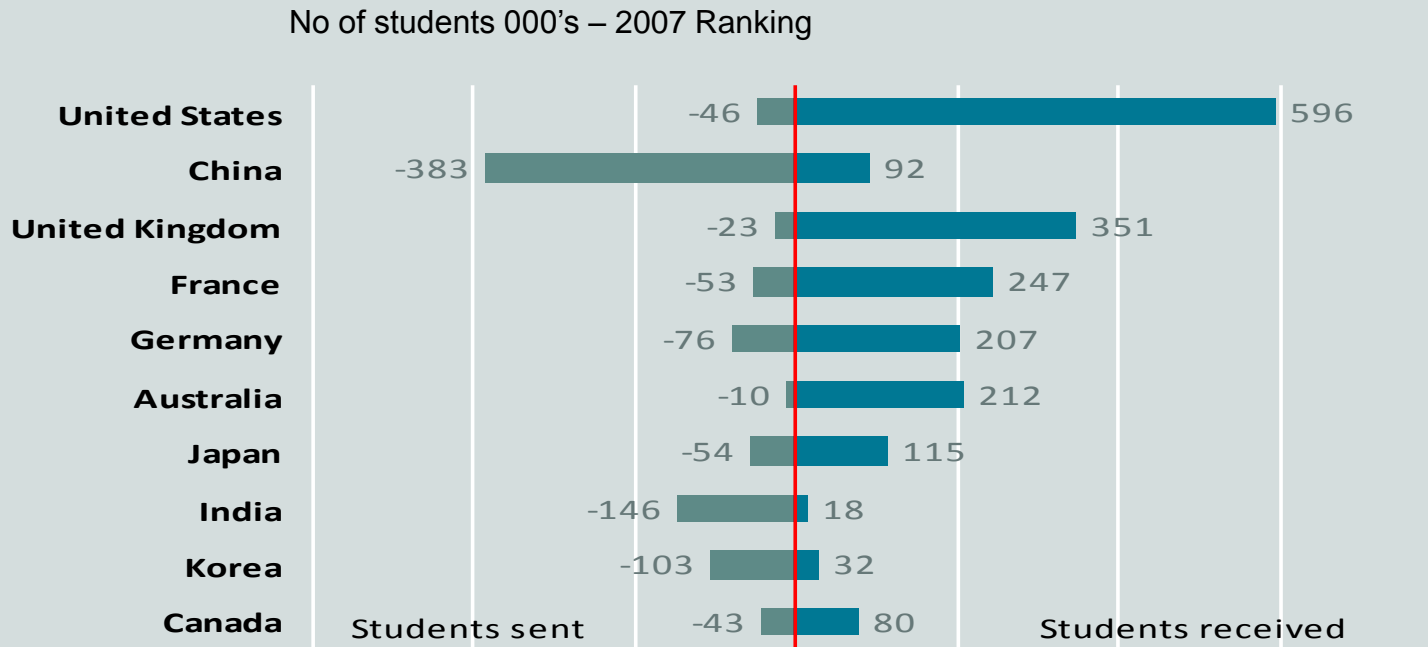
Outbound students – 2007 Rankings



- Australia receives by far the highest proportion of international students
- Small countries represented
- The UK has moved from number 7 in 2003 to number 2 in 2007
- Switzerland and Ireland – big annual jumps
- Morocco and Ireland send the highest proportion of students abroad
- Big gap between other countries
- Switzerland, Austria, Germany, Ireland & Canada appear in both rankings



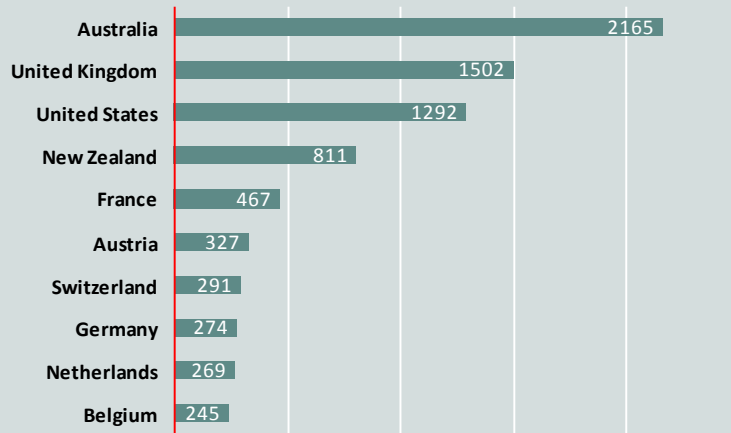
# Total inward and outbound students



- Three are net education importers; China, India & Korea and remaining seven are net education exporters
- The top ten ranked countries sent 945,000 students abroad and received 1,950,000 international students in 2007. This equates to 2.2 students received for every one student sent abroad

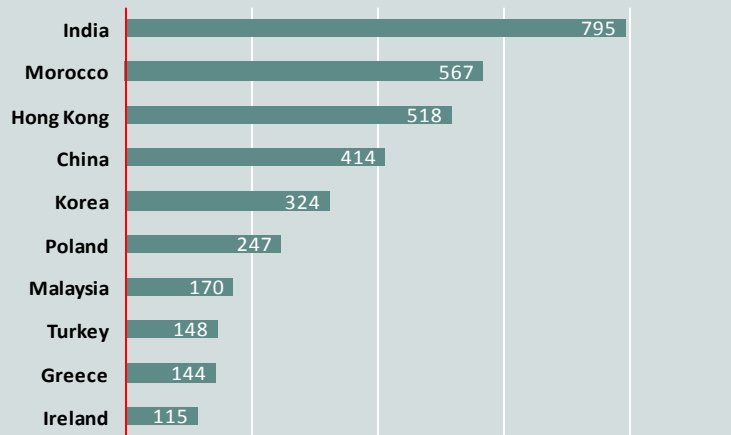
# Balance between inward and outbound students

Inward % Outward students – 2007 Ranking



- Australia received 22 students for every one student sent abroad in 2007
- The UK overtook the US in second place on this measure in 2005 and is likely to have retained this position if trends continued
- Large variance between the countries

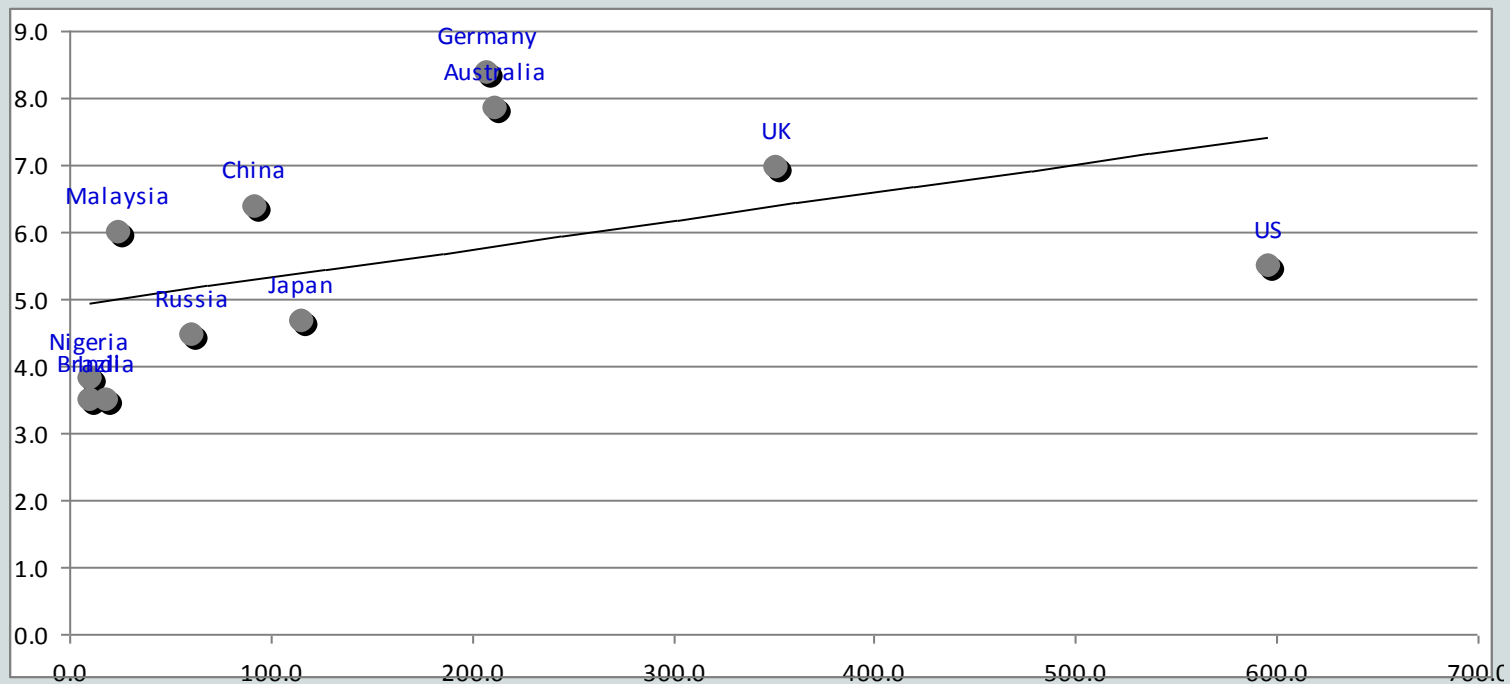
Outbound % Inward students – 2007 Ranking



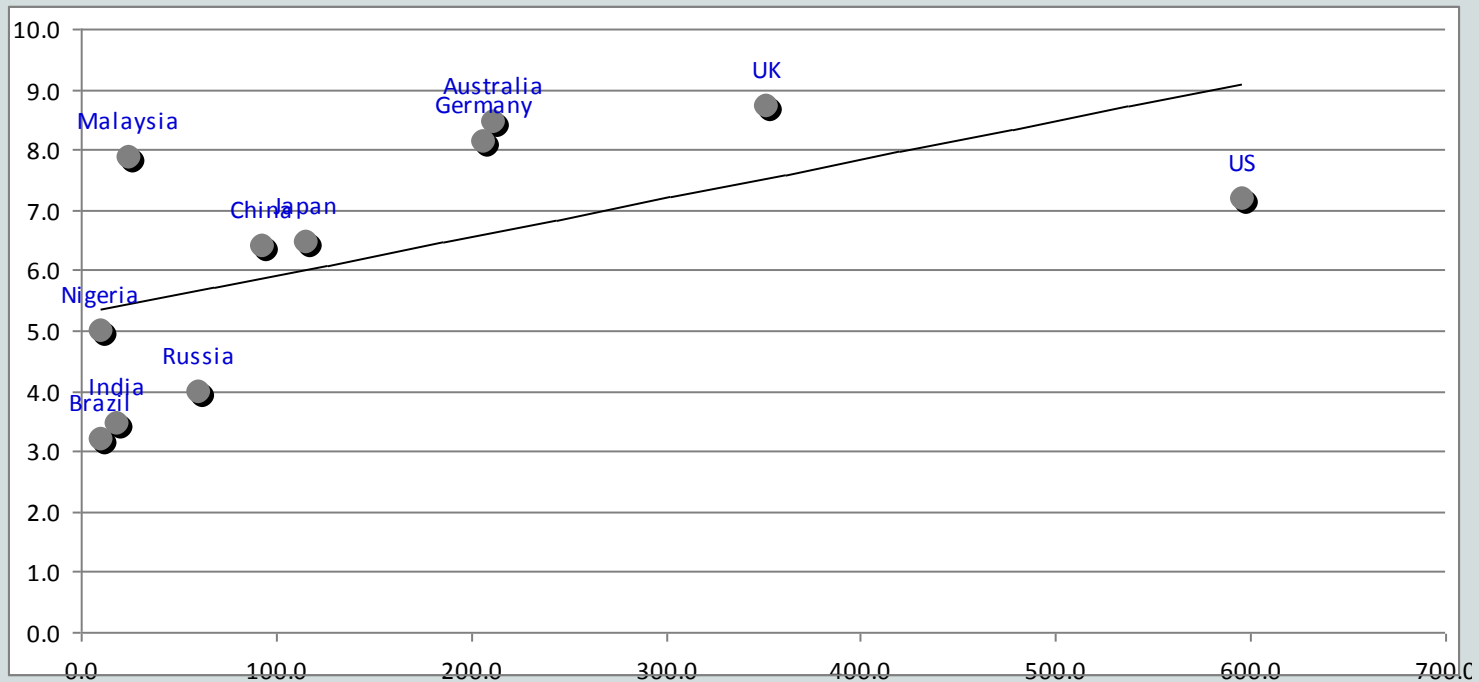
- India sent eight students abroad for every international student received in 2007
- Morocco, Hong Kong and Korea remained in the top five rankings over the period
- Sending countries much more balanced than receiving countries

# Relationship between national policy index and student mobility

- Relationship between “overall” policy score & inbound students
- Correlation coefficient = 0.45



- Relationship between “openness” policy score & inbound students
- Correlation coefficient = 0.57



# Main Findings

- ✓ Data needs to be updated – 3 years out of date
- ✓ US continues to loose market share
- ✓ Australia, UK & China continuing to attracting greater student numbers
- ✓ Germany & Canada truly internationalised as senders and receivers
- ✓ Brazil missing out on cross border education opportunities
- ✓ Some major receivers continue to send relatively few student abroad
- ✓ Some traditional senders refocusing quickly towards attracting students
- ✓ Small countries can have a big impact
- ✓ Relationship seems to exist between national policies and inbound student mobility

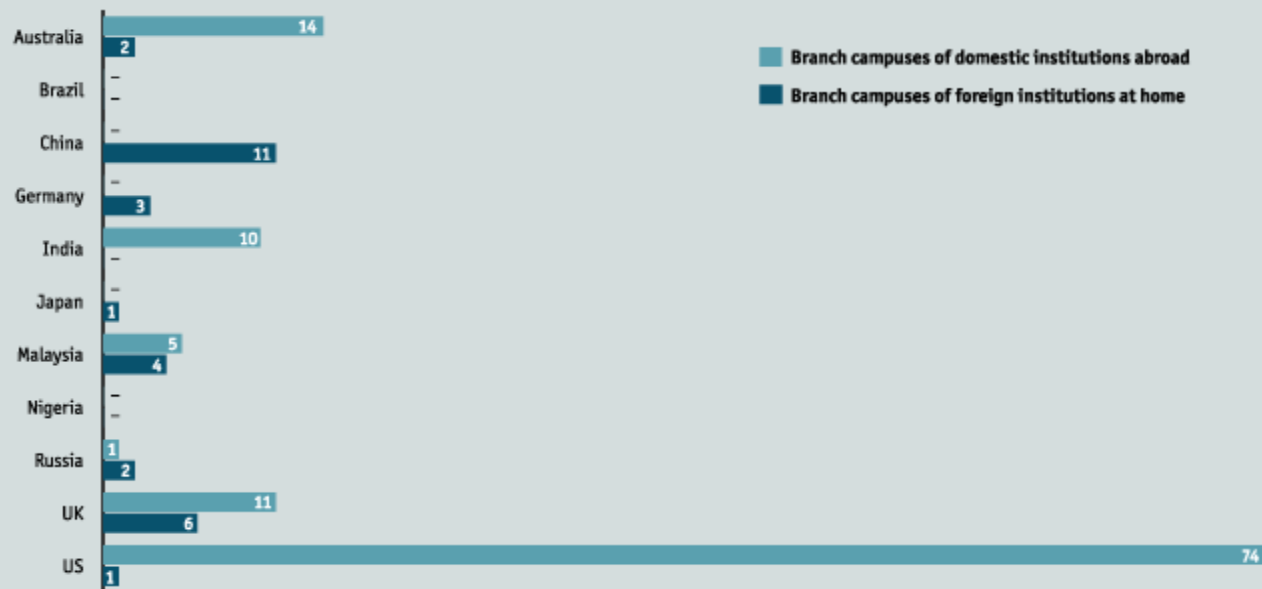
# Collaboration indicators

- Measure transnational education activity and research collaboration
  1. Institutional mobility
  2. Joint research publications
  3. Joint patent applications
- Same 11 countries as policy index
- From both an importer and exporter perspective
- Absolute and relative analysis



# Institution mobility

- Definition of branch campus – OBHE list refined & expanded
- Number of international branch campuses at home and abroad

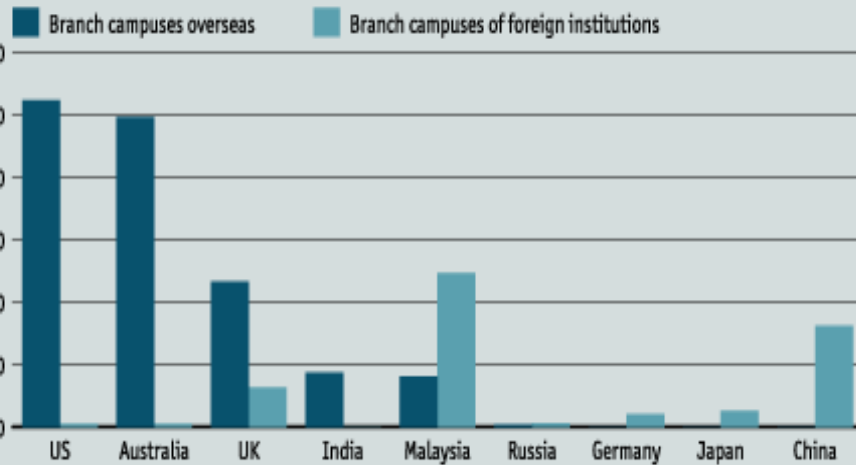


- US has by far the most branch campuses overseas
- China hosts the most foreign branch campuses

# No of students enrolled in international branch campuses

- All institutions contacted - 73% response rate

Students enrolled in international branch campuses  
(no.)

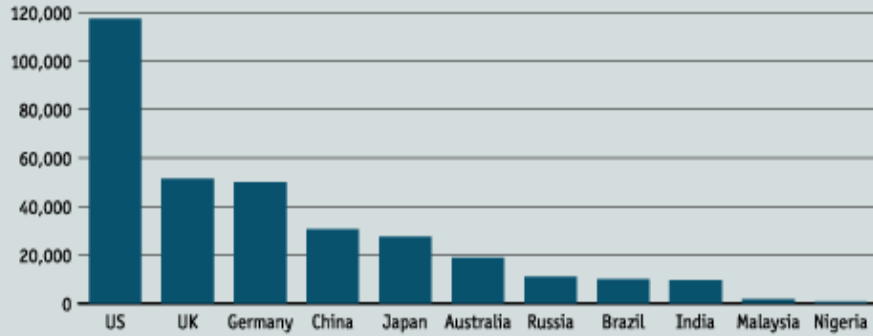


- On average quite small operations – average enrolment 669 students.
- The US has the greatest number of students enrolled in its overseas branch campuses
- Australian overseas campuses appear much bigger than US
- Malaysia hosts the greatest no students enrolled
- UK and Malaysia as both senders and receivers.

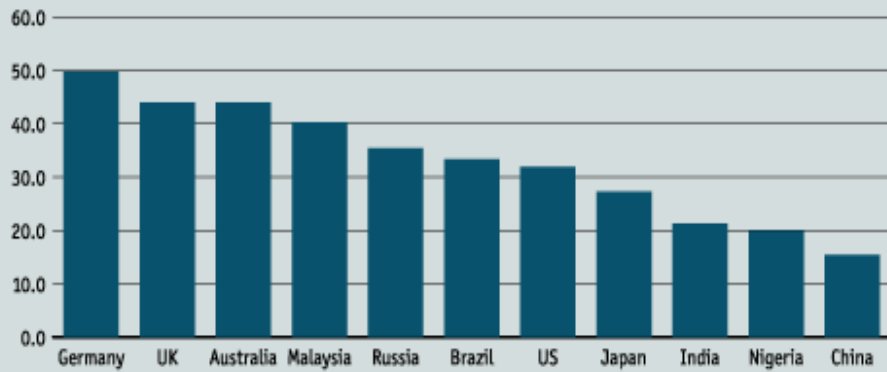


# Joint research publication

Total peer reviewed articles written with foreigners in 2007  
(no. of articles)



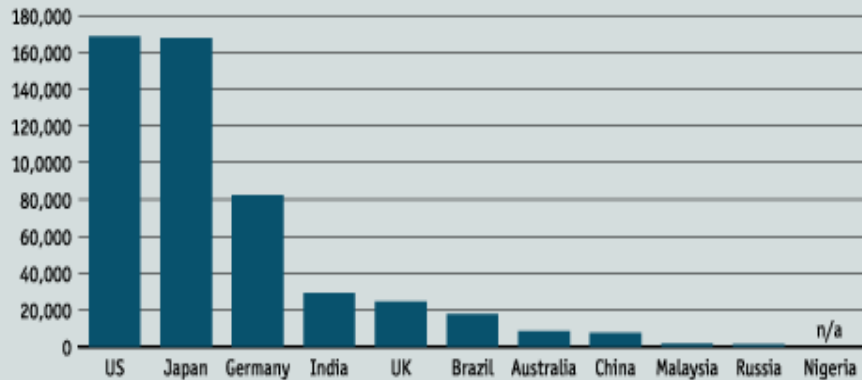
Total academic articles written with foreign authors in 2007  
(% total articles)



- Research publications source – Scopus
- US the market leader in total publications written with foreign authors
- Germany records the highest level of collaboration in publications at 50%
- The UK and Australia are joint second at 44%
- At the other end of the scale, China co-authors just 15 per cent of publications with foreigners, while in India the figure is 21 per cent
- However, in most emerging markets, including India, Malaysia, Nigeria and China the number of cross-border articles produced has been rising fast

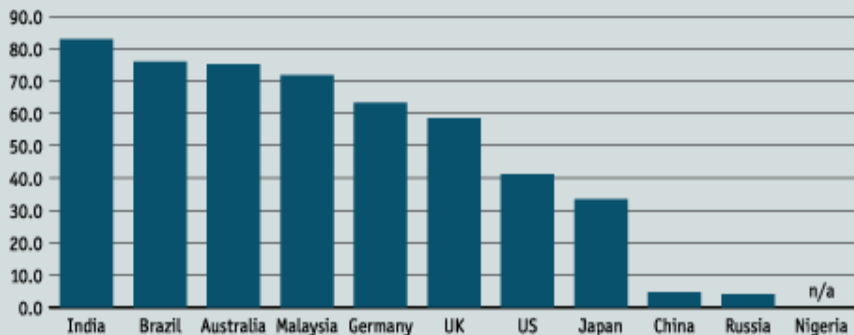
# Joint patent application

Joint patent applications applied for  
(no.)



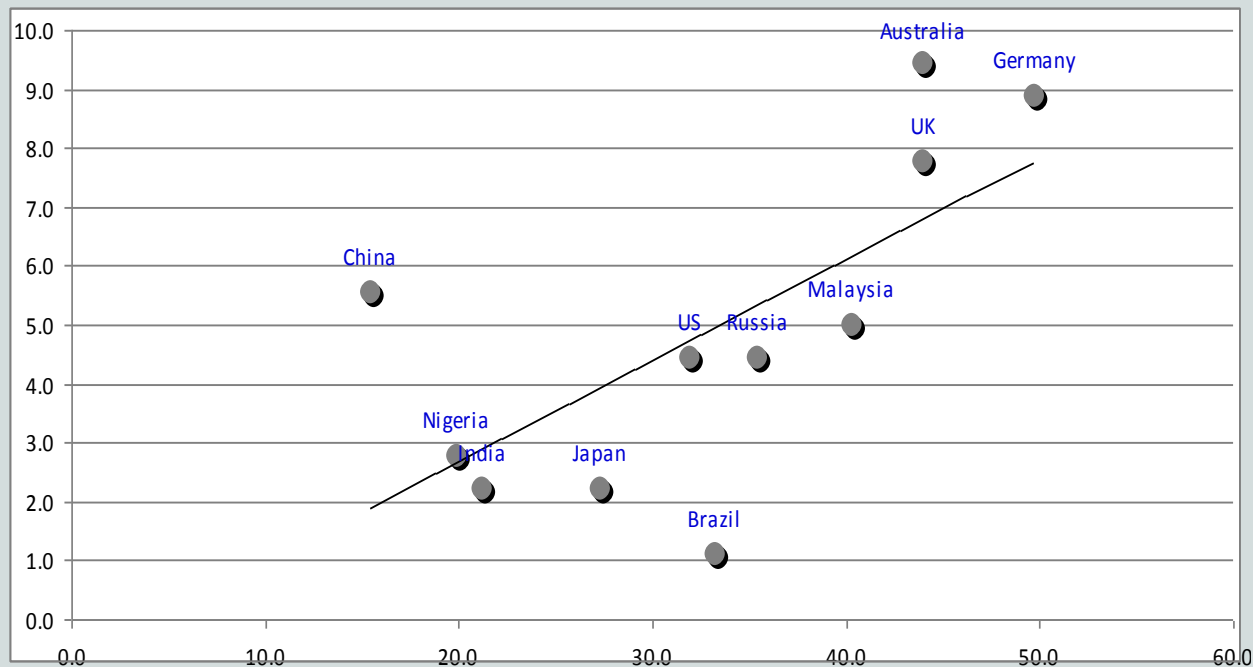
- The US has the highest number of joint patent application at 168,605 in 2007, closely followed by Japan 167,772
- Nigeria has the lowest number of joint patent applications at 603
- India has the highest proportion of joint patent applications relative to total patent applications at 83%, closely followed by the Australia at 75% and Malaysia at 72%
- Russia at 4% has the lowest proportion of joint applications

Joint patent applications applied for  
(% total applications)

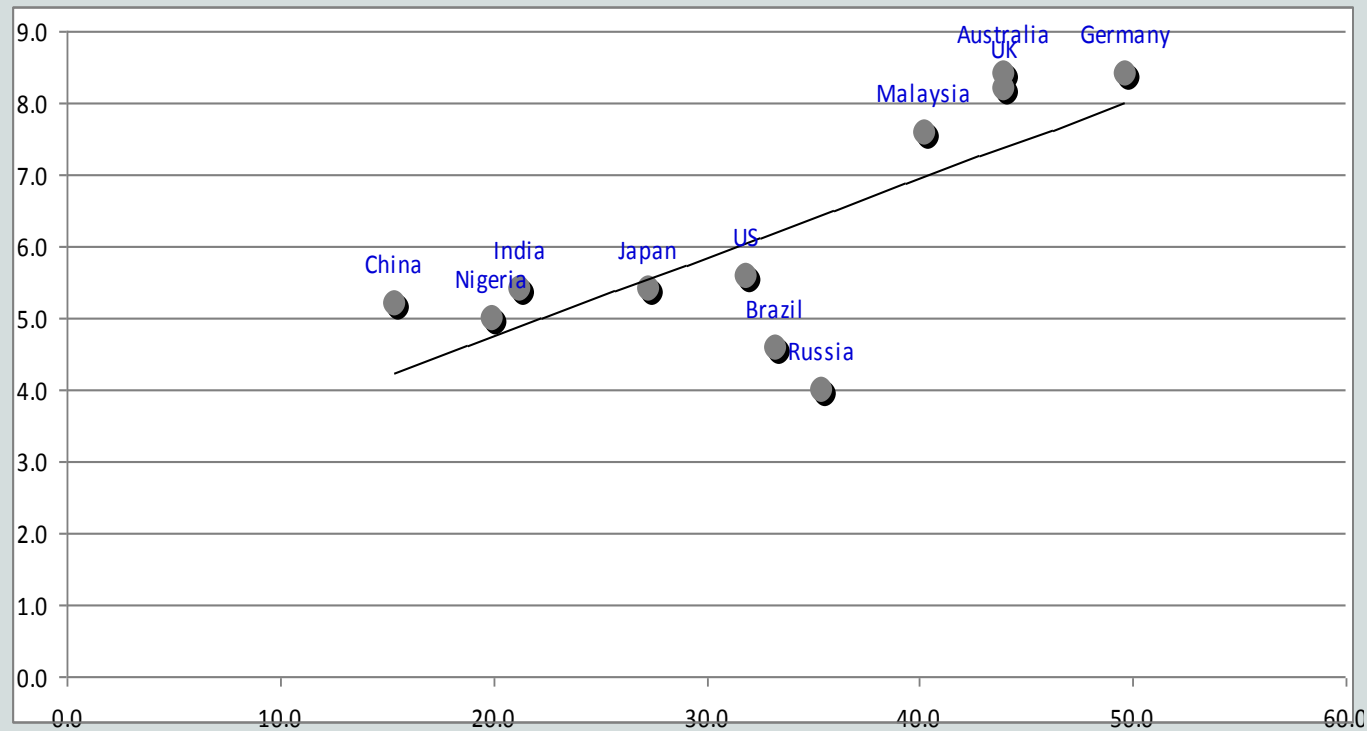


# Relationship between national policy index and collaboration

- Relationship between “quality assurance and recognition” policy score and proportion of peer reviewed academic articles written with foreigners
- Correlation coefficient = 0.67



- Relationship between “internationalisation strategy” policy score and proportion of peer reviewed academic articles written with foreigners
- Correlation coefficient = 0.74



# Panel discussion

