Analysing research outputs to support research innovation and collaboration

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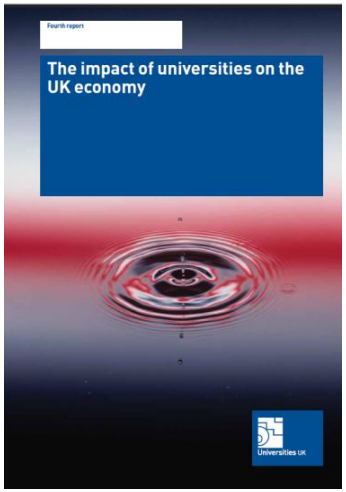
6th March 2013

How UK universities drive economic growth

UK universities generate £59 billion for the UK (2009 UUK study)

- Employ 382,000 members of staff
- Develop/train future employees: 1.9MM undergraduates and 600,000 post-graduates per year
- Spend £27 billion annually on goods and services
- Develop ideas and IP, "Innovation", business and community interaction
  - –Commercialization of new knowledge
  - –Delivery of professional training, consultancy, facilities and equipment, and services (£3.3B)
  - –License income, patents, spin-offs, new businesses



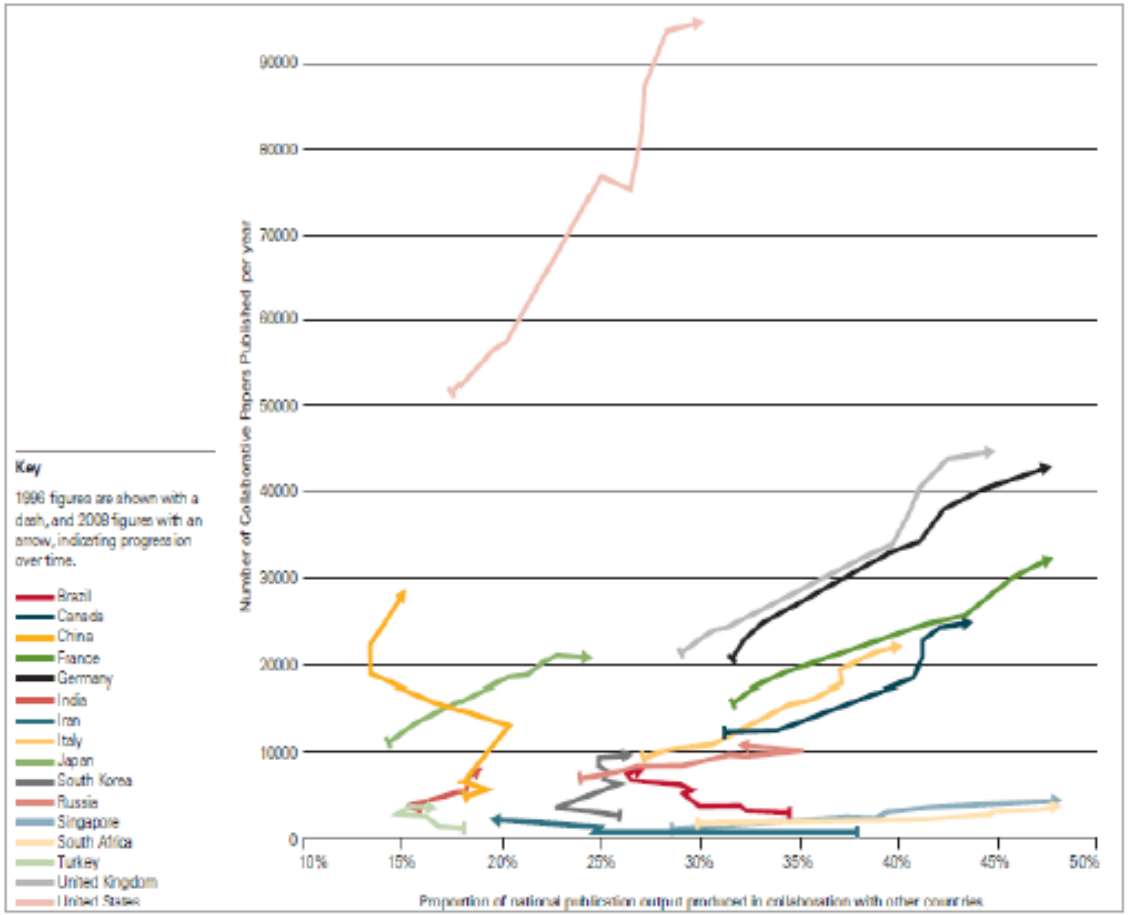
A unique vantage point

Publishing industry, per year:

>3M	articles submitted
>300,000	peer reviewers
1.5M	articles published
30M	readers
2BN	digital article downloads
30M	article citations

Research is increasingly internationally collaborative

Percentage of internationally co-authored articles increased from 26% in 1996 to 36% in 2008



Source: Scopus; The Royal Society – Knowledge, Networks and Nations, 2011

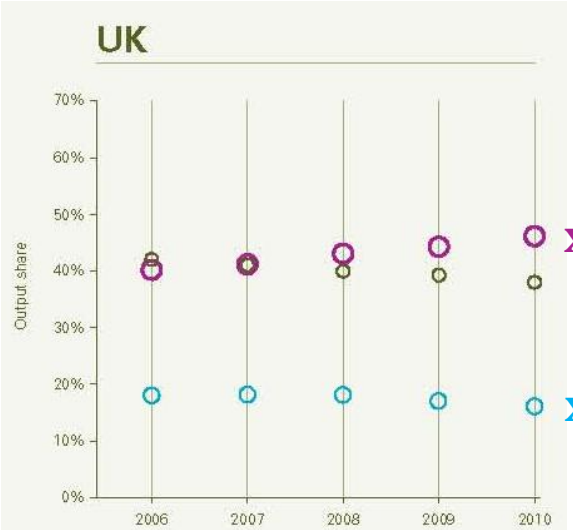
"Collaboration enhances the quality of research, improves its efficiency and effectiveness, and is increasingly necessary as the scale of budgets and research challenges grow"

The Royal Society, 2011

International collaboration drives

- Demand to find collaborators to leverage knowledge and equipment, and co-ordinate efforts
- Need to map collaboration networks

Collaboration correlates to impact



x2.0

x1.4

x1.5

x1.7

International co-authorship
National co-authorship
Institutional co-authorship

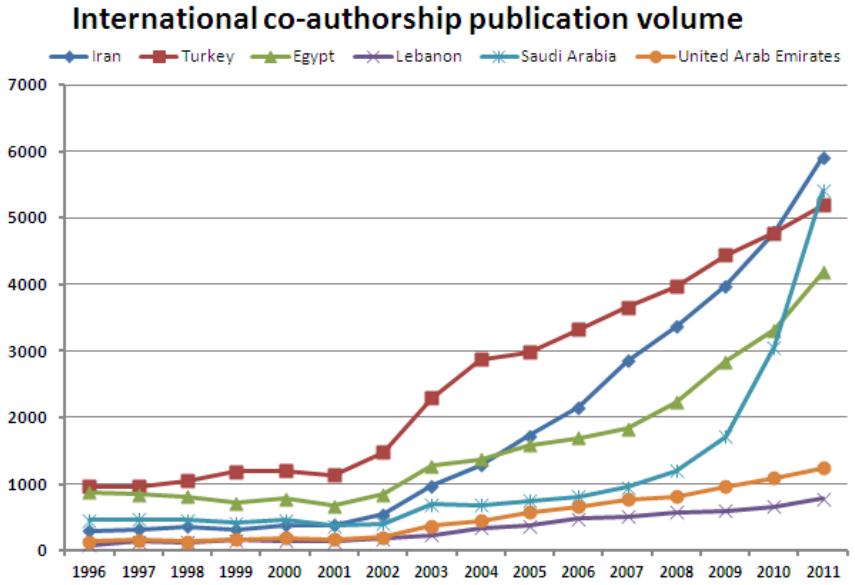
x1.2

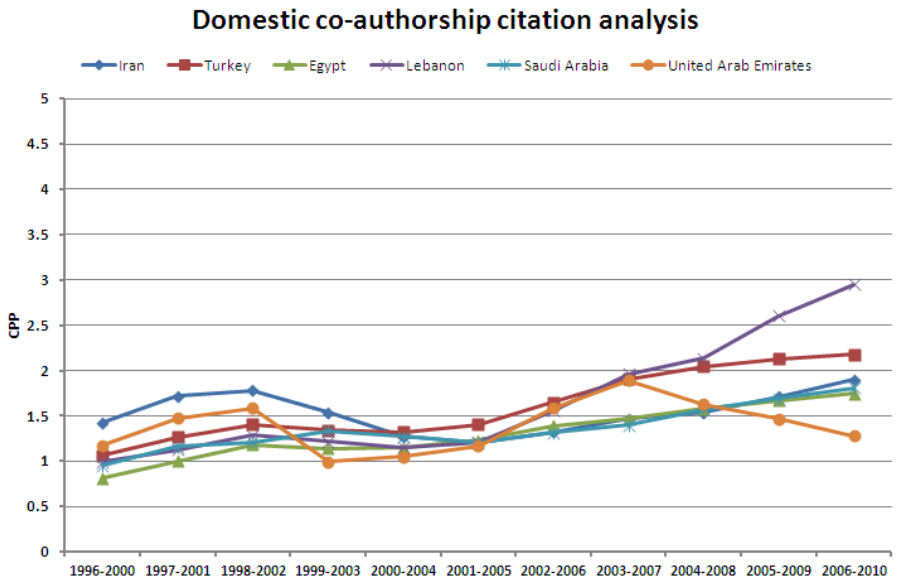
x3.1

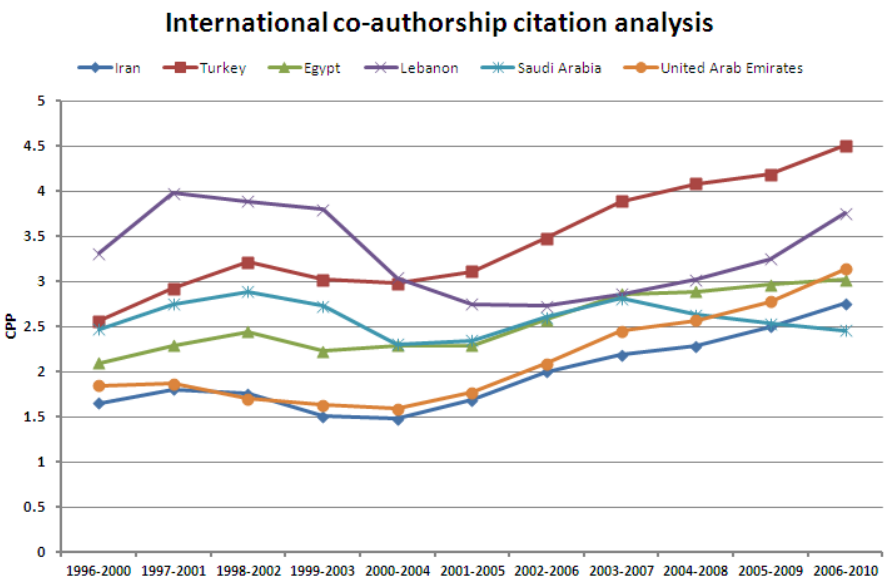
x1.4

x2.0

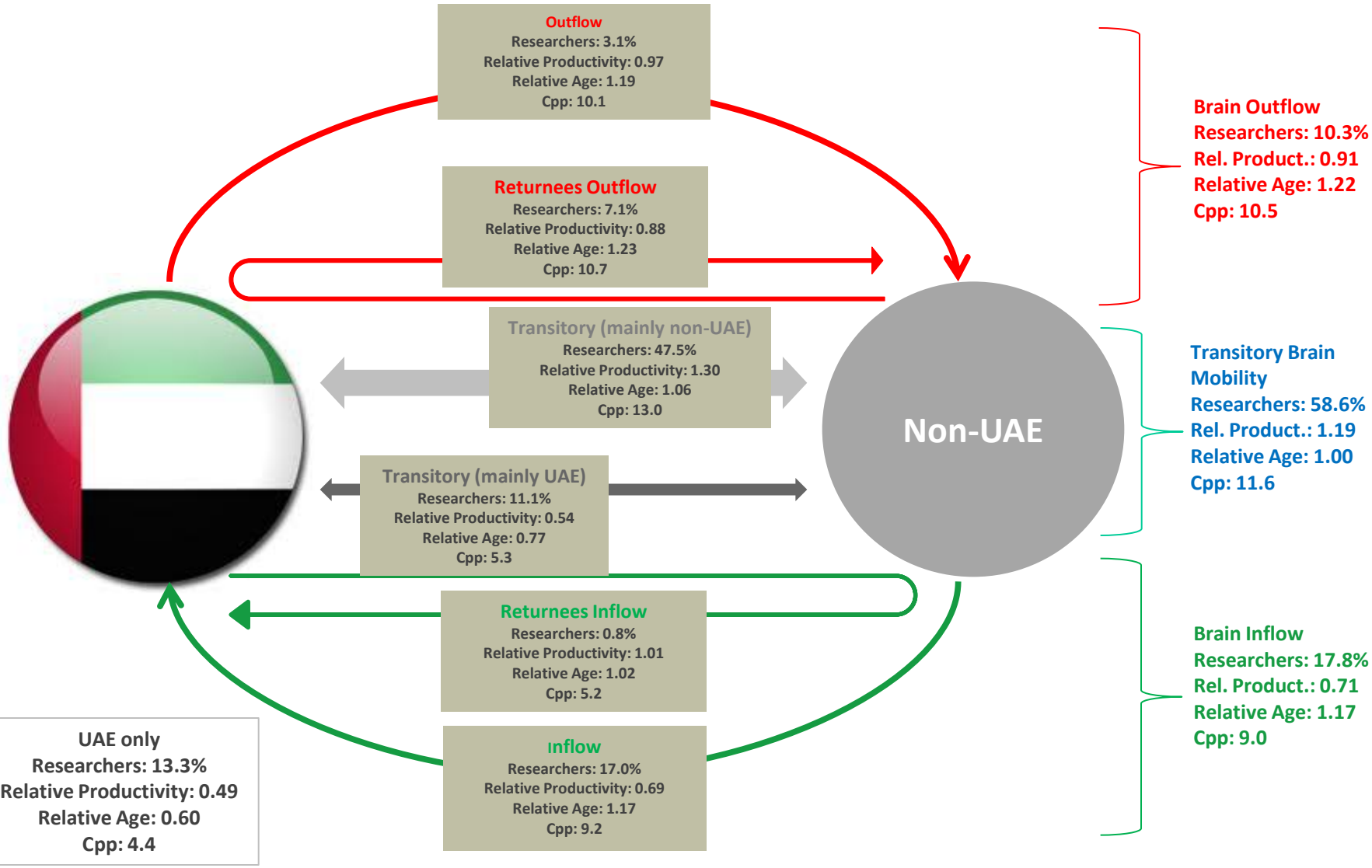
Selected analyses from MENA region







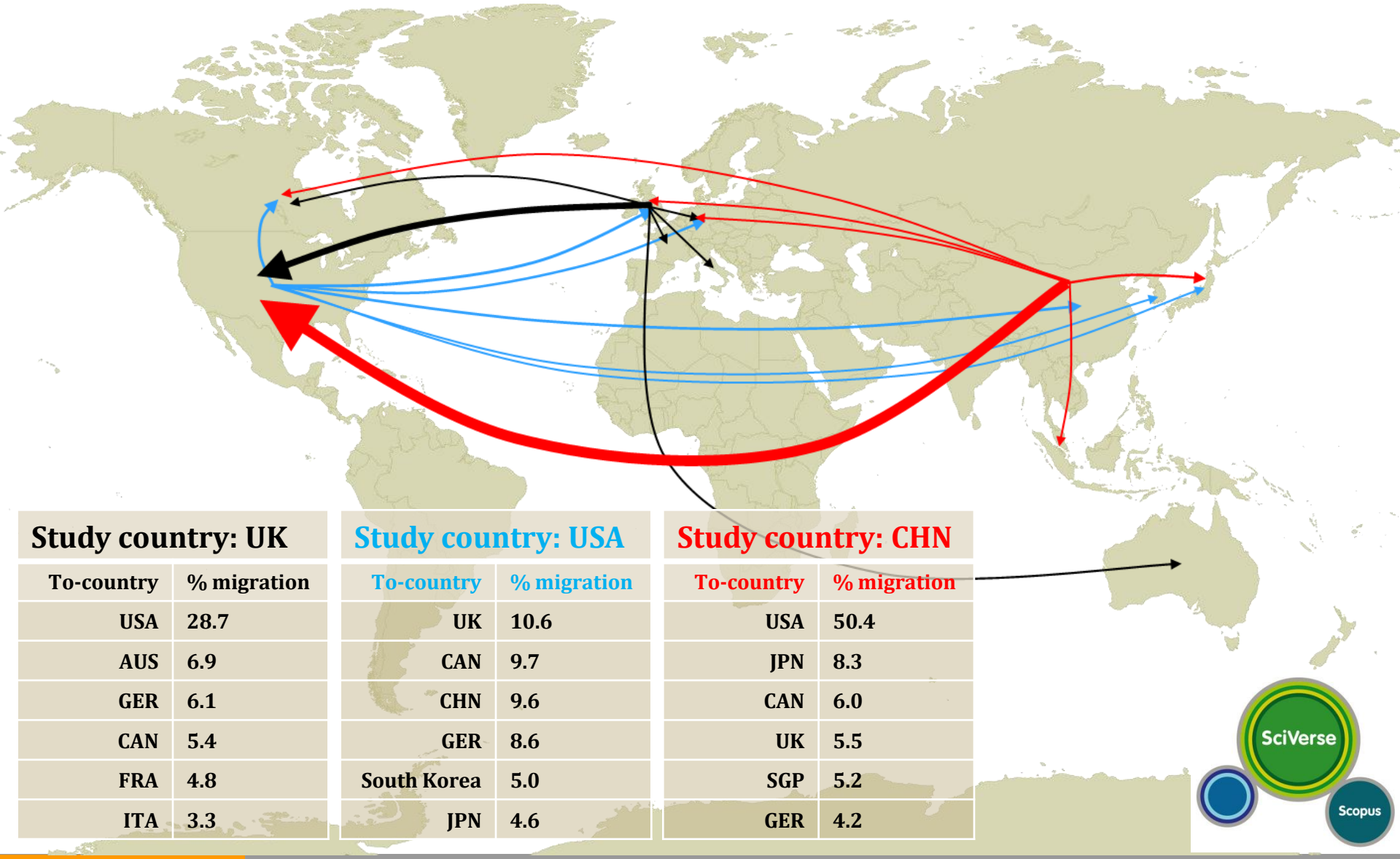
United Arab Emirates Brain Circulation



Migratory researcher = permanent or returnee (2 or more years abroad)
Transitory researcher = less then 2 year abroad

Relative Productivity = articles per year relative to all UAE researchers
Relative Seniority = years of publication activity relative to all UAEresearchers

Global migration patterns



Study country: UK

To-country	% migration
USA	28.7
AUS	6.9
GER	6.1
CAN	5.4
FRA	4.8
ITA	3.3

Study country: USA

To-country	% migration
UK	10.6
CAN	9.7
CHN	9.6
GER	8.6
South Korea	5.0
JPN	4.6

Study country: CHN

To-country	% migration
USA	50.4
JPN	8.3
CAN	6.0
UK	5.5
SGP	5.2
GER	4.2

United Arab Emirates University – Collaboration analysis

Summary and Conclusions

- Global research landscape is fluid, dynamic and intensely competitive

- Global Research is becoming more collaborative, interdisciplinary, international and interconnected

- Research Information can provide insight and knowledge to support adaptation to the changing research landscape

- Publication and citation analyses can help uncover existing and potential new collaborative opportunities and partnerships to support planning and strategy

- This information could ultimately help nations and institutions to continue to grow and thrive