

January 2018

Migration Advisory Committee

Call for Evidence: International students: economic and social impacts

Written submission on behalf of the Engineering Professors' Council

Introduction

1. The Engineering Professors' Council (epc.ac.uk) represents the academic engineers in the UK, with 81 university engineering faculties as members comprising over 6,500 academic staff. All branches of engineering are represented within the membership.
2. Our primary purpose is to provide an influential voice and authoritative conduit through which engineering departments' interests can be represented to key audiences such as funders, influencers, employers, professional bodies and Government.

Summary

3. The EPC has serious concerns about the impact of migration policy on the future of engineering in Higher Education and the wider impact on society through research, innovation, skills shortages and economic impact.
4. Higher education – undergraduate and graduate study – is the gold standard in the delivery of engineering skills in the UK and has a strong international standing and reputation. The UK's Higher Education sector is one of the UK's most important export industries and despite high costs, the UK remains a destination of choice for international students, particularly for engineering subjects. In 2015/16, 1 in 3 Engineering students were international in 2015/16.¹ Furthermore, 1 in 8 international students at UK universities were studying Engineering and technology.²

¹ HESA 'Introduction - Students 2015-16' Table F

² Higher Education Statistics Agency HEIDI data

5. Higher education relies on international mobility more than most sectors of society in terms of attracting experts from all over the world to research and teach in the UK and attracting international students. Moreover, engineering relies on international mobility more than most other academic disciplines. In 2014/15, 40% of engineering and technology academic staff in the UK were non-UK nationals, compared to 28% across all subjects.
6. Engineering is critical and central to the UK's Industrial Strategy. However, there are massive labour skills shortages in Engineering. The UK desperately needs to safeguard and grow the supply of engineering graduates to address the existing massive skills shortages and to plug the talent pipeline shortage in Engineering.
7. Engineering economic activity is dependent on the UK's highly regarded higher education system, highly productive research base and long history of innovation. The excellence of the UK's higher education sector plays a critical role in filling key roles across engineering sectors.
8. International students play a crucial role in meeting industry engineering graduate demand. Attracting engineers and allowing them to do post-study work, working for engineering firms and starting their own enterprises here in the UK, bring huge economic benefits in the short and long term.
9. In addition to our comments herein, the EPC refers MAC to the recent Higher Education Policy Institute and Kaplan International Pathways cost and benefits analysis³, which identifies an average net impact on the UK economy per international student £68,000 (EU student) and £95,000 (non-EU student). This represents a 10:1 ratio of economic benefits compared to the costs to the country of each international student.
10. The Committee will also wish to consider the variations by region included in the report, which demonstrate that every single parliamentary constituency in the UK enjoys a net economic gain from international students.
11. We note that these represent underestimations of the economic impact of international students, due to the omissions of data on: tax and national insurance contributions; the resultant international business and trade links.

³ <http://www.hepi.ac.uk/2018/01/11/costs-benefits-international-students-including-parliamentary-constituency/>

12. The Committee should also note many other non-economic benefits of international students. These include international diplomatic influence (currently 60 world leaders were educated in UK universities) and the wider cultural and societal impacts associated with a more diverse population, such as enabling UK students to meet people from other cultures and gain understanding and contacts that will prove useful in the UK's role in the global economy.
13. We note that the contribution of international students, researchers and staff is also widely acknowledged by business. The EPC welcomes evidence gathering in this regard.

The impact the recruitment of international students has on the provision and quality of education provided to domestic students

14. Universities are global contexts of interaction and collaboration in developing knowledge and skills impacting on wider society.
15. The ability of the UK to attract the best researchers in a field is critical to the maintenance of the UK's excellence in research and higher education. The evidence demonstrates that the primary driver of research excellence is exceptional researchers, with high-performing institutions having more staff who are from, or have worked, overseas.
16. The Higher Education sector is one of the UK's most important export industries and despite high tuition costs, the UK remains a destination of choice for international students, particularly for engineering subjects.
17. The significance of international mobility and engagement is reflected in the international outlook indicator underpinning the Times Higher Education World University Rankings. It is also reflected in other international HE rankings such as QS Top Universities and the 'International Focus' dimension of U-Multirank.

The economic and social impacts beyond education of international students in the UK

18. Engineering is critical and central to the UK's Industrial Strategy. However, there are massive labour skills shortages in Engineering.

19. The Royal Academy of Engineering cite that, of the 32 standard occupations listed in the Home Office Shortage Occupation List, half are either in engineering sectors such as civil, mechanical and electrical, or in allied professions.⁴
20. In particular, a shortfall of engineering graduates is well documented, with EngineeringUK quoting a conservative estimated shortfall of 20,000 engineering graduates each year in the UK⁵.
21. The UK HE system partly counters this shortage for the wider economy by attracting students who have desirable skills from other countries. This is particularly relevant for research projects addressing global issues, for which science and engineering are major contributors and where international partnerships are critical to the effectiveness and impact of the work. UK university engineering departments have higher proportions of international researchers than the average for all subjects.
22. Engineering teaching for many HE institutions is at best a 'break-even' activity, even accounting for the teaching grant contribution and the additional grant for high cost subjects.⁶
23. Since engineering is also a high-cost subject to teach, income from the payment on migrant student fees is a critical source of revenue.
24. International students are also essential to the UK labour market in terms of attracting engineers and allowing them to do post-study work starting businesses and working for engineering firms, bringing huge economic benefits in short and long term.
25. The UK desperately needs to safeguard and grow the supply of engineering graduates to address the existing massive skills shortages and to plug the pipeline shortage in Engineering.
26. International students play a crucial role in meeting industry engineering graduate demand. The annual 20,000 shortfall of engineering graduates assumes that similar numbers of international students will continue to study in the UK and continue to work in engineering in the UK.

⁴ <http://www.raeng.org.uk/publications/reports/engineering-a-future-outside-the-eu>

⁵ <https://www.engineeringuk.com/research/>

⁶ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/254885/bis-13-1269-professor-john-perkins-review-of-engineering-skills.pdf

27. In particular, the supply of postgraduate-level skills in engineering and computing is currently highly dependent on international graduates studying in the UK, more so than any other major higher education discipline.

28. The shortfalls cannot be met for the foreseeable future by increasing the skills base of UK nationals. There is not a large surplus of domestic student applicants with suitable qualifications applying to engineering courses. To increase the number of applicants would involve major changes throughout the entire education system. Even if effective, these would take many years to feed through the pipeline to address the skills shortages. Furthermore, there is no evidence they would be effective: initiatives that have already been operating for many years either have shown limited impact or the effect has merely been to avoid a drop in applications to engineering.

29. If the skills shortfall were to be met by increasing the UK talent pipeline and reducing international student migration, that would have significant impact on the financial sustainability of engineering courses which, in many cases, are modelled on average tuition costs that are higher than the available funding for UK students and are supplemented by international student fees.