

## **15 EUROPEAN AND WIDER GLOBAL IMPACTS**

Higher education is inherently international. Globally, the centrality of international partnerships and global perspectives to the success of Universities is reflected in university and funders' strategy and policy. The University of Oxford has a very strong international profile, with a global student body and academic staff and an impressive array of international research collaborations.

### **15.1 An International Academic Workforce**

Mobility is a key consideration for academics pursuing their careers and for institutions in developing the strength and profile of departments. This is reflected within international rankings with the Times Higher Education rankings methodology including a specific 'international outlook' element. The methodology for those rankings notes that, "the ability of a university to attract undergraduates, postgraduates and faculty from all over the planet is key to its success on the world stage"<sup>72</sup>.

International staff are therefore core to the success of the UK's university sector. The Royal Society notes<sup>73</sup>:

"The international profile of the UK's academic workforce reflects the ability of the UK to attract talent from overseas and this supports the UK's scientific excellence. UK institutions with greater proportions of foreign researchers and researchers with international experience scored more highly in the recent Research Excellence Framework".

Analysis by Elsevier<sup>74</sup> for the UK Government found that the UK is a focal point for global research collaboration and researcher mobility, noting that:

"the UK occupies a central position in the global network of collaborative partnerships and the resulting articles from these partnerships are associated with higher field-weighted citation impact than that observed for all internationally collaborative articles published by either the UK or its major partner countries. .... In interviews with key individuals in the academic sector from across the UK and abroad, international collaboration and researcher mobility were acknowledged as being core to the maintenance and further development of the UK's world-leading position as a research nation, especially in light of the relatively limited inputs to the UK research base in terms of R&D expenditure and the number of researchers."

Analysing UK researcher mobility over the period 1996-2012 Elsevier found that the UK researcher population is more mobile than most comparator countries. Strong international links were evidenced through almost three-quarters of active UK researchers over the period having published articles while affiliated with non-UK institutions. Further, those staff moving to or from the UK and not returning over the period were disproportionately senior and associated with high field-weighted citation impact.

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<sup>72</sup> Times Higher Education World University Rankings, 2016-17 Methodology  
<https://www.timeshighereducation.com/world-university-rankings/methodology-world-university-rankings-2016-2017>

<sup>73</sup> <https://royalsociety.org/topics-policy/projects/uk-research-and-european-union/role-of-eu-researcher-collaboration-and-mobility/snapshot-of-the-UK-research-workforce/>

<sup>74</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/263729/bis-13-1297-international-comparative-performance-of-the-UK-research-base-2013.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/263729/bis-13-1297-international-comparative-performance-of-the-UK-research-base-2013.pdf)

In this context, the University of Oxford has seen an increasing internationalisation of its workforce<sup>75</sup>. Over the 6 years to 2014-15 it saw an almost one-third (32.7%) increase in the full time equivalent (FTE) number of non UK staff, with the proportion of all staff from outwith the UK rising from 29% to 33%. Over the same period the UK sector as a whole saw the proportion of its FTE staff rise from 19% to 21%. For academic staff, over the three years to 2014-15 Oxford has seen a strong increase (17%) in the number of staff from outwith the UK. Almost half of all academic staff are now from outwith the UK (a rise from 44% to 48% over the three years). This compares with 30% of staff in the sector's academic workforce, rising from 27.5% over the three years to 2014-15. The number of international Postgraduate (Research) students has also increased significantly. The University of Oxford saw a 19% increase in the number of international postgraduate research students over the 6 years to 2014-15. The figure for the UK sector as a whole was 12%<sup>76</sup>.

## 15.2 Global Presence

Wider international impacts are created by the University's physical presence in many countries around the world. Many Oxford research projects across all four academic divisions involve a significant, long-term overseas presence. For example, its Tropical Medicine laboratories create a substantial overseas research presence, employing some 1,500 staff in Asia and Africa<sup>77</sup>. The Centre for Tropical Medicine and Global Health conducts research at three Wellcome Trust Major Overseas Programmes in Kenya, Thailand and Vietnam as well as its Centre in Oxford. It also brings together a number of sister groups in Laos, Tanzania, Indonesia, the Democratic Republic of Congo, Myanmar, Cambodia and Nepal, as well as multiple collaborators around the world<sup>78</sup>.

The University maintains a physical presence in China, the USA and Japan. These offices are used to engage with the alumni communities within these countries, attract potential students who wish to study at the University and promote the research and public activities that are undertaken by the University.

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<sup>75</sup> All subsequent figures drawn from HESA

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<sup>77</sup> Oxford's International Profile: <https://www.ox.ac.uk/about/international-oxford/oxfords-international-profile?wssl=1>

<sup>78</sup> Centre for Tropical Medicine and Global Health <http://www.tropicalmedicine.ox.ac.uk/home>

Figure 15.1 – China and the University of Oxford

The University of Oxford has a relationship with China that dates back centuries and students from China, including Hong Kong, make up one of the biggest international student communities at Oxford. This creates global relationships after graduates return home - there are more than 3,000 Oxford alumni in China<sup>79</sup>. Importantly, the University of Oxford has a permanent presence in China through wholly-owned subsidiary companies:

- University of Oxford China Office (Hong Kong);
- Oxford University Press (China);
- Oxford University Beijing Science and Technology Company Ltd; and
- Isis Enterprise Asia.

In addition, the University of Oxford China Centre<sup>80</sup> connects Oxford academics doing research on China across a variety of disciplines.

Oxford scientists also collaborate extensively with their Chinese counterparts on joint research, with the largest-scale projects in the medical field led by Oxford's Clinical Trial Service Unit, which has a dedicated China Programme that includes the China Oxford Centre for International Health Research<sup>81</sup>. This Centre is affiliated to Fuwai Hospital (part of the Cardiovascular Institute at the Chinese Academy of Medical Sciences). The Centre is a research institute mainly for studies of large-scale multi-centre clinical trials and epidemiology.

The University of Oxford has also embraced technologies that enable it to have a global presence without the need for physical infrastructure. It leads an international lecture series, when academics from the University give public talks in China and India. In 2016, the University launched a massive open online course (MOOC) in collaboration with edX. This will allow potential students, anywhere in the world with an Internet connection to participate in the education provided by the University of Oxford.

## 15.3 Supporting and Growing International Businesses

The University of Oxford also has a direct contribution to non-UK economies through activities that occur within the University. This includes:

- overseas commercialisation;
- services to overseas businesses; and
- graduates overseas.

### 15.3.1 Overseas Commercialisation

#### 15.3.1.1 *Licensing*

The majority of the technology that is licenced by the University of Oxford is held by companies outside the UK, particularly in the USA which accounted for 80% of all royalties income. However, University of Oxford licences are held by companies in 29 countries throughout the world, from Spain to Singapore.

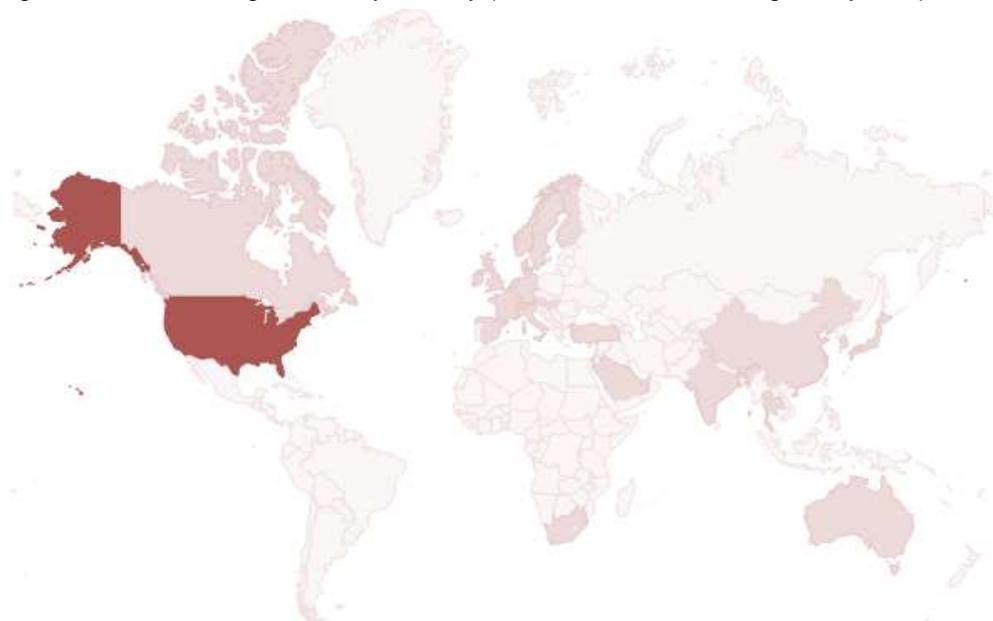
<sup>79</sup> Oxford in China website: <http://www.oxforduchina.org/oxford-in-china.html>

<sup>80</sup> <http://www.oxforduchina.org/the-oxford-china-centre.html>

<sup>81</sup> <http://chinaoxford.fuwai.com/en/>

It was estimated that the international companies that held these licences generated additional turnover from these licences in 2014/15 worth approximately £275 million.

Figure 15.2 – Licensing Income by Country (darker shades denote higher royalties)



Source: BiGGAR Economics

### 15.3.1.2 Spin-Outs

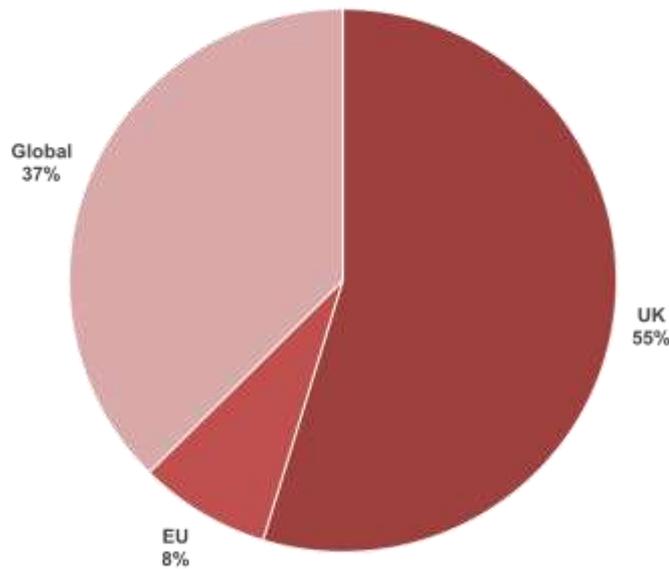
In 2014/15, there were eight spin-out companies of the University of Oxford that were based outside the UK and others that had an international presence. This includes companies such as Oxford Instruments plc which had international sales of £320 million of which £100 million was from within the EU. Although Oxford Instruments is headquartered within the UK it also had a significant staff presence elsewhere in the world. It was estimated that just over 50 % of all employees of the company were based outside the UK.

It was estimated that the total turnover of the international spin-out companies was £290 million, of which £20 million was within the EU. These companies employed 120 staff within the EU and approximately 1,000 more staff elsewhere in the world.

### 15.3.2 Services to Business

A significant proportion of the services to business the University of Oxford offers, were given to companies outside of the UK. In 2014/15 the companies based in the UK accounted for 55% of all consultancy income, companies based elsewhere in the EU accounted for 8% and companies based elsewhere in the world accounted for 37% of consultancy contract income. Therefore, it was assumed that 45% of the direct commercial returns to businesses would be realised by companies outside the UK. The geographic breakdown of contract research and facilities hire income was not available and so it was assumed that the consultancy breakdown was also representative of these services.

Figure 15.3 – Income from Consultancy by Geography



Source: University of Oxford

The international students also account for the majority of the participants of the CPD and executive education that is run by the University of Oxford.

**15.3.3 Graduates**

The 275,000 alumni of the University of Oxford can be found in every corner of the world and these graduates take the learning experiences of the University to workplaces in their country. Although the majority of graduates remain in the UK after they have completed their studies, 26.2% of graduates take their learning experience and go to find work elsewhere. Based on the current profile of students of Oxford it was estimated that 9.6% of graduates find work elsewhere in the EU and 16.6% find work outside the EU.

These graduates will be more productive as a result of their education at the University of Oxford therefore will be able to contribute more to the economies in which they work. The graduate premium varies significantly between countries as for example the earnings profile of a graduate working in China is likely to be different to that of one working in Germany. However, in this analysis it was assumed that the international graduate premiums would be equivalent to those achieved in the UK in order to provide an estimate of the total graduate contribution to the global economy.

**15.4 Quantifiable Economic Impacts**

This analysis also considered some of the quantifiable economic contribution associated with the University in the EU and globally<sup>82</sup>. The results of this

<sup>82</sup> It should be noted that the estimates of the economic contribution outside the UK are based on the same methodology that is applied to the UK contribution. This includes the ratios of turnover and GVA per employee. Therefore, these estimates are likely to be less accurate than those within the UK, especially the proportion of impact that occurs in neither the EU or North America, where economic ratios are broadly similar.

analysis are shown in Table 15.1, which shows that in 2014/15 the University of Oxford contributed an estimated:

- £5.8 billion GVA and 50,560 jobs in the UK;
- £5.9 billion GVA and 51,689 jobs in the EU; and
- £7.1 billion GVA and 70,093 jobs globally.

The commercialisation activity of the University, including Oxford University Press had the greatest impact outside the UK, accounting for the majority of the GVA contribution and employment supported. The graduate premium of students who left the UK in search of employment was also a significant.

Table 15.1 – Quantifiable International Contribution of the University of Oxford 2014/15

|                                 | UK            | EU            | Global        |
|---------------------------------|---------------|---------------|---------------|
| <b>GVA (£m)</b>                 |               |               |               |
| Core Contribution               | 2,244         | 2,316         | 2,384         |
| Student Contribution            | 80            | 81            | 83            |
| Commercialisation Contribution  | 320           | 355           | 723           |
| Oxford University Press         | 382           | 457           | 855           |
| Science Park Contribution       | 167           | 45            | 46            |
| Knowledge Transfer Contribution | 272           | 304           | 555           |
| Tourism Contribution            | 58            | 59            | -             |
| Graduate Premium                | 432           | 488           | 585           |
| Medical Research Contribution   | 1,836         | 1,836         | 1,836         |
| <b>Total GVA</b>                | <b>5,791</b>  | <b>5,942</b>  | <b>7,068</b>  |
| <b>Jobs</b>                     |               |               |               |
| Core Contribution               | 31,158        | 32,157        | 33,102        |
| Student Contribution            | 1,981         | 2,006         | 2,031         |
| Commercialisation Contribution  | 5,722         | 6,621         | 16,897        |
| Oxford University Press         | 6,112         | 7,412         | 15,777        |
| Science Park Contribution       | 3,043         | 826           | 840           |
| Knowledge Transfer Contribution | 805           | 912           | 1,447         |
| Tourism Contribution            | 1,737         | 1,756         | -             |
| Graduate Premium                | -             | -             | -             |
| Medical Research Contribution   | -             | -             | -             |
| <b>Total Employment</b>         | <b>50,560</b> | <b>51,689</b> | <b>70,093</b> |

Source: BiGGAR Economics