

OXFORD LEADS THE WAY IN UK BIOTECH SUCCESS

While the success of the UK's high-tech industry based in and around Cambridge is relatively well-reported, what is less well known, reveals new research, is the progress made by the UK biotech industry more generally, and in particular the biotech cluster -- a region of specific technical expertise -- centred on Oxford.

The biotechnology industry is likely to play a key role in the future economic prosperity of the UK. The UK government's most recent figures show that at the end of 2003, Europe's biotechnology industry employed approximately 82,400 people and generated €16.3 billion of revenue. The UK was the single biggest contributor to the European biotech sector with 455 companies employing approximately 22,400 people and generating revenues of £3.6 billion¹.

Professor Rick Delbridge from Cardiff Business School, Senior AIM Fellow and co-author of the Advanced Institute of Management Research report *BIOTECH CLUSTERS IN THE UK: Challenges and opportunities*, says: "It is a highly innovative and rapidly growing area of economic activity, with widespread applications across a range of sectors. Our survey of 165 firms in the biotech industry reveals a number of promising biotech centres in the UK: in Scotland, South West England and most notably in Oxford. How successful these are long term, however, will depend in part on how effective government is in meeting the policy challenges highlighted in our research."

One interesting story that emerges from the research is the importance of services in the UK biotech sector. "The crucial role of service providers is often overlooked when assessing innovation in the biotech sector," says Delbridge. "What is also not well recognised is the high level of skills and investment in training among service providers."

- Of the 165 firms in the study 41% were service providers, against 30% primarily engaged in research;
- These service firms were highly innovative filing an average of 14.5 patent applications per firm, compared with 9 from the research establishments;
- Nearly half of all staff at the service firms have at least a first degree and these firms spend an average of 13.2% of sales revenues on training, compared with 8.7% and 4.2% for research establishments and manufacturers respectively.

The common perception of the service industry is one of cost cutting and offshoring to countries such as China and India. The research shows, however, that while the biotech firms have a global network of relationships, when it comes to relationships with service providers 88% are UK based, and within that 47% are with companies within 50 miles.

The research by AIM also highlights some challenges faced by policy makers when designing policy initiatives to promote the growth of biotech clusters.

These include:

- A huge variety of organisations make up the biotech value chain in terms of age, size and activity, from MNCs to small start-ups, making a tailored and targeted approach to policy and support necessary. Targeting assistance is a challenge as boundaries to biotech clusters are not clearly defined – they span activities and geographical areas – and many firms (51%) in the value chain report that biotech is a relatively minor part of their business.
- Policy at regional levels must be tailored to fit the development stage of the cluster. For mature clusters such as Oxford, cluster policy needs to target areas such as the removal of barriers to further growth, in emergent clusters like Scotland attention to skills and network capacity might encourage further development, while in nascent clusters like the South West further encouragement of entrepreneurship and provision of both capital and business support is probably the priority.

With the right policymaking approach the UK biotech industry has the potential to make a significant impact to the UK economy: the biotech cluster at Oxford is well-established and thriving but can still benefit from carefully tailored national and regional policymaking designed to assist its growth; two emerging clusters in Scotland and the South West of England, may have the potential to grow into

significant biotech clusters and their success, while dependent on a number of factors, could be helped by sensitive and appropriate policy making.

The report: *BIOTECH CLUSTERS IN THE UK: Challenges and opportunities.*

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Notes for Editors

- AIM Research is funded by the Economic and Social Research Council (ESRC) and the Engineering and Physical Sciences Research Council (EPSRC) and was launched in November 2002. AIM's mission is to improve understanding of management's contribution to organisational performance, and thus UK well-being. AIM's more specific objectives are: (i) to conduct research that will identify actions to enhance the UK's international competitiveness; (ii) to raise the scientific quality and international standing of UK research on international competitiveness; (iii) to expand the size and capacity of the active research base for UK research on management; and (iv) to develop the engagement of that capacity with world-class research outside the UK and with practitioners as co-producers of knowledge about management and other users of research within the UK. For more information on AIM visit www.aimresearch.org
- The ESRC is the UK's largest funding agency for research and postgraduate training relating to social and economic issues. It provides independent, high-quality, relevant research to business, the public sector and Government. The ESRC invests more than £76 million every year in social science and at any time is supporting some 2,000 researchers in academic institutions and research policy institutes. It also funds postgraduate training within the social sciences to nurture the researchers of tomorrow. More at <http://www.esrc.ac.uk>
- The Engineering and Physical Sciences Research Council (EPSRC) is the UK's main agency for funding research in engineering and the physical sciences. The EPSRC invests more than £500 million a year in research and postgraduate training, to help the nation handle the next generation of technological change. The areas covered range from information technology to structural engineering, and mathematics to materials science. This research forms the basis for future economic development in the UK and improvements for everyone's health, lifestyle and culture. EPSRC also actively promotes public awareness of science and engineering. EPSRC works alongside other Research Councils with responsibility for other areas of research. The Research Councils work collectively on issues of common concern via Research Councils UK. Website address for more information on EPSRC: www.epsrc.ac.uk

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ⁱ http://www.dti.gov.uk/sectors_biotechnology.html#uk