

# **BiGGAR Economics**

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## University of Strathclyde Economic Impact Study

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A report to



17<sup>th</sup> September 2013

### **BiGGAR Economics**

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# 1 EXECUTIVE SUMMARY

The University of Strathclyde is a “place of useful learning”; this is the University’s founding statement, guiding philosophy and statement of purpose for the future. Through the realisation of this purpose, the University generates economic impact, through its day-to-day operations of generating income for teaching, research and knowledge transfer, purchasing supplies, employing staff and capital investment and through a range of activities that involve engaging with partners to solve problems of significance to contemporary society. The baseline economic impact of the University of Strathclyde for 2012/13 has been estimated as:

- £276.5 million gross value added (GVA) and 7,805 jobs in Glasgow;
- £489.7 million GVA and 13,031 jobs in Scotland; and
- £527.5 million GVA and 13,194 jobs in the UK.

When the increased future productivity (associated with a one year cohort of graduates) is included the total economic impacts are estimated at:

- £523.3 million GVA in Glasgow;
- £1,009.3 million (i.e. £1 billion) GVA in Scotland; and
- £1,118.7 million (i.e. £1.1 billion) GVA in the UK.

However, this figure is an understatement of the University of Strathclyde’s impact on the economy and of the impact of its partners’ investment in Scotland and consequent economic benefits. The University’s collaborative relationship with industry and the public sector and the leadership role it has in delivering innovation and the development of competitive advantage in priority sectors is crucial to future economic performance; however, this scale of this impact is hard to measure due to its intangible nature.

While the full long term economic impact of the University of Strathclyde’s activities is difficult to measure, even those impacts that can be measured represent a good return on the investment from the taxpayer.

In 2012/13 the University of Strathclyde had an income of £237 million. Of this, £92 million was accounted for by grants from the Scottish Funding Council (SFC) and a further £31 million came from tuition fees from Scottish and EU students (most of which was also funded from Scottish public sector budgets), giving a core income from the public sector of £123 million. Therefore, for every £1 received by the University of Strathclyde from the Scottish public sector budget, an economic impact of more than £8 was generated in the Scottish economy (including increased future productivity associated with a one year cohort of graduates).

Consultation with industry partners, undertaken as part of this economic impact study, confirms that the collaborative research partnerships in which the University of Strathclyde is involved are expected to have a significant economic value but a value that is not possible to quantify. The research programmes are focused on pre-competitive, industry-level challenges, with expected outputs that can then be further developed into new or enhanced products or processes by individual companies. The industry partners consulted anticipate that many of the global market opportunities associated with the challenges being addressed by the collaborative research programmes could be in the hundreds of millions, or even billions.

The wider role of the University in driving future economic growth, over and above those impacts that can be quantified, is illustrated in the figure below.

Figure 1-1: University of Strathclyde and Future Economic Growth



The figure above shows some examples of how the University of Strathclyde’s approach of useful learning and working collaboratively with industry and the public sector to solve problems delivers results for the economy. Further examples and indicators of the University’s economic contribution include:

- research and commercialisation – the University’s excellence in this activity is demonstrated by its position as the fifth best university in the UK for spin-out and start-up formation in the last ten years and the rank of fourth in the UK for the number of Knowledge Transfer Partnerships being undertaken;
- collaborative research centres – an example of the approach the University takes to useful learning is through the formation of collaborative research centres. There is not one set model of working in partnership with industry and the public sector; instead the University has a flexible approach to each partnership that demonstrates its ethos of useful learning in action. The method of engagement depends on the problem to be solved, the nature of the partners involved and the University’s existing and potential strengths. Partnership with industry involves engagement of the key companies in the field, which are typically international companies such as Rolls Royce and GlaxoSmithKline, and small and medium sized enterprises (SMEs) including indigenous growth companies that are wishing to be part of the supply chains of global companies. The University’s role in pulling together the activities of industry and the public sector is exemplified by the Technology & Innovation Centre (TIC), the University’s contribution to a large scale collaborative economic development project at the International Technology & Renewable Energy Zone (ITREZ) in Glasgow City Centre. The TIC will create a new kind of partnership, challenge conventional thinking about university collaboration and help the UK and Scotland’s industries compete on the world stage. This will be done by revolutionising the way that researchers in academia and industry collaborate and innovate together to find solutions to challenges in sectors central to economic competitiveness and growth;

- inward investment – education, training and innovation are the University's main areas of activities. These activities also contribute to the attractiveness of a location for inward investment. In particular, Scotland has been more successful than the rest of the UK at attracting manufacturing inward investment projects; the University of Strathclyde supports Scotland's manufacturing investment proposition ranging from renewables to bioengineering to pharmaceutical manufacturing. The research-intensive inward investment attracted is particularly important as the UK and Scotland rank poorly compared to comparative countries for the percentage of gross domestic product that is invested in research and development (R&D). In particular, the contribution of business R&D to total R&D spend in the UK and Scotland is lower than other comparative countries. The University of Strathclyde helps to address this weakness in the Scottish economy, for example, by attracting business R&D investment to collaborative research centre membership schemes. Another example of attracting business and R&D is the Technology Strategy Board's (TSB) Catapult programme, which is investing £1 billion to create a network of world-leading centres to transform the UK's capability for innovation in seven specific areas and drive future growth. These centres are where UK businesses, scientists and engineers work together on late-stage research and development. Glasgow is participating in three of these seven centres: the Future Cities Catapult, the High Value Manufacturing Catapult and the Offshore Renewable Energy Catapult. The University of Strathclyde was instrumental in attracting all three to Scotland. Collaborations with industry are also a driver of global links; this is exemplified by the University of Strathclyde's selection as the exclusive European partner university for South Korea's global research and commercialisation programme; and
- priority sectors – the UK government has identified advanced manufacturing as one of its strategic sectors while the Scottish Government has seven priority sectors of which three are sectors that the University of Strathclyde is deeply engaged in: energy (in particular renewables), life sciences and the universities sector. In addition there are opportunities presented in Scotland's strengths in public sector dominated industries including education and healthcare. The University is a significant contributor to these industries training Scotland's teachers, being a leader for pharmaceutical teaching, home to one of only two UK courses in prosthetics and orthotics and using the TIC to enhance engagement with industry in health technologies.

As with other universities a key contribution of the University of Strathclyde to businesses, sectors and the economy and society as a whole is the contribution of skilled workers, at graduate and advanced degree levels. For example the University of Strathclyde is one of UK's largest engineering schools and the largest in Scotland, producing nearly 50% of Scotland's engineering undergraduates in electronics, mechanics and software. This increases long-term economic productivity (and has been valued by using the graduate premium, an estimate of the additional lifetime earnings associated with a university education).

These activities maintain and support the current business base in Glasgow and Scotland, increase their propensity for R&D and engagement with priority sectors and help to attract companies to invest in the area. Key sectors include renewables and life sciences.

The University's day-to-day operations support a core impact from generating income for teaching, research and knowledge transfer, purchasing supplies, spending of employees' wages and investment in capital projects. These activities

also support other economic activities such as the spending and working of students and increased visitors due to friends and family visiting staff and students, conferences and events hosted by the University and activities that are enabled by the increase in visitor accommodation capacity provided by the University's student accommodation.

The presence of the University in the centre of Glasgow has a qualitative impact through adding to the vibrancy of the city centre and a quantitative impact through capital projects, which support the regeneration of the city centre. In particular the ITREZ, of which the TIC is the largest component, will be a key element in the regeneration of Glasgow city centre and is identified as a regeneration priority in various local and regional planning and regeneration strategies.

These impacts are the foundation of future growth in the economy. The University aims to be respected as one of the leading technological universities in the world. To achieve this the University will:

- extend its £350 million estates programme to produce a campus fitting for its ambition;
- significantly expand its current collaboration activities; and
- develop new collaboration activities in issues of global importance

Realising this aim will enhance the UK and Scotland's global profile, global links and global competitiveness and attract more partners and create further growth, meaning that the future economic impact of the University of Strathclyde is expected to be even greater than its current impact.