

DEBATE REPORT

Can university-business collaboration be used to maximise short-term economic growth and reduce unemployment levels in Wales?

A joint debate with The Learned Society of Wales held at Cardiff University on 3rd July, 2013

The Foundation is grateful for the support for this meeting from
Cardiff University and The Learned Society of Wales

Chair:	The Earl of Selborne GBE FRS Chairman, The Foundation for Science and Technology
Speakers:	Professor Colin Riordan FLSW President and Vice-Chancellor, Cardiff University Sir Leszek Borysiewicz FRS FRCP FMedSci FLSW Vice-Chancellor, University of Cambridge Sir Terry Matthews OBE FREng Chairman, Wesley Clover
Panellist:	Edwina Hart MBE CStJ AM Minister for Economy, Science and Transport, Welsh Government

PROFESSOR COLIN RIORDAN began by pointing out that the medium and long-term as well as the short-term could and should benefit from the impact of Higher Education Institutions (HEIs). He gave details of the direct benefits of Welsh HEIs in general and of Cardiff University in particular on employment. And he gave further details about benefits to the Welsh economy in the form of foreign students, research contracts funded from outside Wales, capital investment, research activity, consultancy and professional education. He believed that HEIs had an important role to play in fostering student and graduate entrepreneurship through both finance and mentoring.

Innovation was fundamental to the generation of benefits for the medium and longer term. Welsh HEIs needed to develop a culture of innovation (undergraduates needed to be exposed to the way in which innovation was achieved and then transformed into commercial applications) and a physical environment which would attract high quality researchers from all over the world to come to Wales.

There needed to be collaboration across the sector. He underlined the importance of harnessing the social sciences to assist in securing public support for technological advance. Finally, he was optimistic about the future for the economy of Wales because there was a positive vision for the future shared by the

Welsh Government, Welsh industry and the Welsh HEIs.

SIR LESZEK BORYSIEWICZ reminded the audience that in EU countries 25 per cent of all young people between the ages of 18 and 25 were now unemployed. This not only constituted a terrible waste of talent but also cast a shadow over the future social and economic stability of EU countries. A report by McKinsey presented at the 2013 Davos World Economic Forum¹ revealed an alarming mismatch between the views of educators on the one hand and employers and young people on the other about the ability of the education system to equip young people with the skills needed to obtain jobs. There needed to be much greater collaboration between educators and employers over the design of the curriculum at both school and university level.

A major challenge for HEIs was to foster an enterprise culture and to show that entrepreneurial achievements attracted the same esteem as academic achievements. He noted that in Germany and Austria, much greater importance was attached to apprenticeships and that technical education was as highly regarded as academic education. He had been encouraged to find that the university society with the biggest membership at Cambridge was Cambridge University Entrepreneurs. And the success of the "Cambridge Cluster" showed what could be

achieved through a combination of high quality research, an enterprise culture and a readiness on the part of the university to give active support to those wanting to transform innovation into successful businesses. He warned that such an achievement required long-term commitment and effort and that other ingredients essential for success included a good transport infrastructure, excellent housing and local education facilities of the highest quality.

It was also important not to try to predict which innovations would result in successful companies (who would have predicted that Amazon, just a bookseller in 2000, would become the huge enterprise of today?). Instead those fostering new businesses needed to ensure that they had reserves of resources ready to support those businesses which emerged as winners. He saw no reason why Wales, with its excellent HEI research base and its access to European structural funds, should not follow the Cambridge example, especially if it sought to work in partnership with other high quality HEIs in the South West (albeit outside the borders of the Principality), if it was not impatient for short-term results and if it was prepared to risk failures – it was itself a failure to attempt a 95 per cent success rate in business start-ups.

SIR TERRY MATTHEWS said that future economic success depended on transforming good graduates into successful businessmen. He described what he saw as the essential ingredients for that transformation. Vital to success were close connections between businesses and HEIs (and colleges) with the latter encouraging and helping graduates to start up their own companies and to ensure that those companies were clearly focussed on identifying and meeting customer requirements.

He believed that among undergraduates and graduates there was a wealth of enthusiasm for business success and HEIs needed to help that success by harnessing their experience and knowledge to the enterprise by participation in advisory boards and by mentoring. Inevitably there would be failures, especially in the first year when credibility had yet to be achieved but the risk of failure should diminish over time as customers became more confident of reliability of supply.

He also believed in ensuring that the rewards of success were as much in the form of own-

ership as in pay; it was important for a successful entrepreneur to be hungry for the new business to take-off and grow. He hoped that HEIs would encourage internships to ensure that graduates were familiar with the real world of business. He lamented the demise of sandwich courses that had in the past done much to foster close links between students and businesses.

For the first of the two discussion periods the panel of speakers was joined by the Minister, EDWINA HART, who said that she agreed with much of what the three speakers had said in their presentations. She said it was vital that the current high rates of youth unemployment were speedily reduced. It was vital that those emerging from Higher and Further education were "fit for purpose" and able to make a positive contribution to the expansion of the Welsh economy and the wealth of the Welsh nation. The Government of Wales stood ready to support research and innovation and shared the concerns of the speakers that attitudes towards inevitable business failures should not be such as to deter entrepreneurial risk-taking. The Government of Wales favoured apprenticeships.

The two discussion periods (before and after dinner) were characterised by a broad measure of support for the main themes made in the presentations. Speakers from the world of education did not challenge the emphasis placed by speakers from the world of business and commerce for greater involvement in curriculum content and for the fostering of an entrepreneurial culture in academia. One speaker did, however, point out the need to ensure that graduates were well prepared not only for their first job but also for the fact that, in the modern world with rapid technological change and the need for possibly four major career changes, graduates needed to have the capacity to relearn. And another warned that curriculum design had to cater for the interests of students as well as the interests of employers.

But several speakers argued that, if more effort was made to ensure that students were given good information about employment opportunities, the interests of students and employers might not diverge. Indeed many speakers were very positive about the keenness of the young to be innovative and to be successful in the workplace.

The comments from the HEI participants were generally supportive of the importance of men-

toring to assist business start-ups. They did not seem to see such involvement as a distraction but rather as conducive to significant long-term benefits to HEIs – benefits in the form of enrichment of the HEIs' core role as well as finance, including research income. Indeed several HEI speakers stressed the need for policy makers in Government not to seek to measure the pay-off from innovation simply in terms of intellectual property rights.

The point was also made that innovative small and medium enterprises could make a major contribution to quality improvements in learning. Mention was made of the Raspberry Pi product for which production had now been brought back from China into Wales and which could greatly enhance the ability of students to deepen their knowledge of information technology by introducing them to programming.

Mention was made of the relatively (in relation for example to Scotland) poor record of success in Wales in securing funding from Technology Strategy Boards and Research Councils. What mattered was not just the number of and quality of applications submitted but also the vigour with which those applications were submitted and followed up.

The question of sustainable companies was touched upon in a number of contributions. The point was made that for the Welsh economy to grow and prosper there needed to be not only a continual flow of innovation-led new businesses but also a readiness to allow natural selection to take place so that the weak ones fell and the strong ones were able to grow in size and scope: "Wales needed more big winners" was one comment.

There was some discussion of the nature and structure of Welsh post-school education. Speakers stressed the need to ensure strong Further Education institutions as well as strong HEIs and also to make sure that the research effort in HEIs was not too thinly spread. The new Lord Baker proposed University Technology Colleges were seen as a valuable new initiative which would help to raise the status and esteem of vocational and technical education.

At the conclusion of the discussion the panel members were asked what message they would wish to see given to Welsh politicians. The two key points were: trust your commu-

nity and remember that both education and business needed to be allowed adequate time for positive results to come through.

Sir John Caines KCB

Useful web links are:

Aberystwyth University
www.aber.ac.uk

Bangor University
www.bangor.ac.uk

Cardiff University
www.cardiff.ac.uk

Cardiff Metropolitan University
www3.cardiffmet.ac.uk

The Foundation for Science and Technology
www.foundation.org.uk

Glyndŵr University
www.glyndwr.ac.uk

Higher Education Funding Council for Wales
www.hefcw.ac.uk

The Learned Society of Wales
www.learnedsocietywales.ac.uk

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