

DINNER/DISCUSSION SUMMARY

Beyond the recession; what can science and innovation partnerships do for you?

Held at Queen's University Belfast on 7th October, 2009

The Foundation is grateful for the support for this meeting from Queen's University Belfast and *InterTradeIreland*.

Chair: **The Earl of Selborne KBE FRS**
Chairman, The Foundation for Science and Technology

Speakers: **Professor Peter Gregson FREng**
President and Vice-Chancellor, Queen's University Belfast
Eoin O'Driscoll
Chairman, Forfás, Ireland's National Policy Advisory Board and Managing Director, Aderra
Dr Iain Gray FREng
Chief Executive, The Technology Strategy Board

LIAM NELLIS, Chief Executive of InterTrade Ireland, welcomed the return of the Foundation to a Northern Ireland venue, and stressed the need for and the growth of cross-border co-operation and fusion. Over 240 companies had participated in the All Ireland Technology Transfer Programme, and 90 per cent of these had emphasized the importance and benefit of relationships with one or more third-level institutions. It was also important to recognise the potential of the US/Ireland Research and Development Partnership.

THE EARL OF SELBORNE then introduced the three main speakers, and outlined the aim of the discussion as being the exploration of the role of science and innovation, often involving universities in partnerships with other "players", in restoring a gravely damaged and weakened economy.

PROFESSOR PETER GREGSON opened by quoting with approval the words used by Kamlesh Sharma, Secretary-General of the Commonwealth and now Chancellor-designate of the University: "Knowledge is now the currency of the 21st century". In comparison to the UK norm, Northern Ireland had relative strengths in some sectors and relative weaknesses in others. It was in an essentially SME economy, in which 99 per cent of the companies employed fewer than 50 people Northern Ireland faced many testing challenges: rebalancing its economy and reforming public administration; developing a stronger manufacturing base; addressing new and emerging markets; building a strong value-added agrifood sector; and many others.

The key players in all this were the universities, business and government. In important respects these interests were interdependent, and must now work closely together to create a "cycle of innovation". The problems facing the economy were all too clear. The outcome of the recession could not yet be fully foreseen, but would certainly include a shrinking of markets, an inevitable sharpening of competition, and a comparative dearth of funding for investment.

Professor Gregson went on to examine possible solutions in the key areas of investment, marketing and competitiveness, stressing throughout the proven benefits of partnerships: whether between universities, across jurisdictions, or between universities, government and business. In particular he emphasized the capacity of universities to "spin off" new companies based on their research; for example Queen's already accounting for some 1,000 jobs. The research strategies of universities and industries should be better aligned. The real challenge would be to bring the relevant players together to promote an "innovation cycle".

EIOIN O'DRISCOLL pointed out that for many years the Republic of Ireland had relied heavily upon inward investment, largely but not wholly from America, as the main driver of its economy. A major factor in attracting this investment had been a favourable tax regime, and the initial (and quite prolonged) impact had been a phenomenal growth in exports and GDP. It was, however, sadly now all too apparent that during this period of boom costs had been allowed to spin out of control, with a huge subsequent loss of international competitiveness. They must now cut costs; but cost-cutting alone would not be enough. Ireland's share of world trade had been falling off. They faced testing challenges such as the inexorable economic rise of China and the impact of the EU Services Directive. The remedy lay, as he saw it, in the development of what he described as "new temporary monopolies" in carefully chosen niche knowledge areas. Ireland was not without its strengths and potential assets in areas like the harvesting of the power from wind and waves, photonics research, pharmaceuticals and the life sciences. Henceforth their economy must compete on the basis of value rather than low cost, seeking to create wherever possible unique sustainable competitive positions. They must in the fullest sense engage with the marketplace, seeking better market intelligence and an understanding of consumer needs. They must provide more funding for what could be termed "applied" research; how to foster the use of technology and the potential for development beyond the fundamental research stage. All of this would be "a messy process", but they could no longer survive and prosper as a "vassal economy", relying upon others for the knowledge foundations of economic success. In conclusion he re-emphasized the aim; to develop "temporary monopolies based on knowledge".

Dr IAIN GRAY stressed that the Technology Strategy Board was a business-driven organisation working with businesses, universities and the public sector; it was more than just a funding agency. The staff were themselves drawn from a business background and brought to the task many years of accumulated business experience. They had £1 billion to invest over the next three years with the challenge of creating a more innovative climate. He made it clear that their support was available for the full range of businesses; large or small, manufacturing or creative. Their challenge was to identify sectors and firms capable of development within "the growth sectors of tomorrow". They sought to pick "winners"; that is to say, innovative companies in sectors of potential growth. Thus the TSB was focussing on areas such as low carbon technology, low impact building, and potential developing areas of health care including stem cell research and development and regenerative medicine. In such cases, the Board worked closely with other relevant bodies.

Everything the Board sought to do was dominated by the concept of partnership. This meant promoting joined-up public sector support of innovation; the promotion of ever-closer relationships with business, government departments and agencies, and with funding agencies such as the RDAs. Although the Board had an English focus, it was beginning to develop beneficial links with the devolved administrations. It had been important to earn the leverage of support from other funding sources. Partnership must be an essential element in developing innovative platforms, collaborative R&D, knowledge transfer networks and innovation and knowledge centres. Dr. Gray concluded by congratulating Northern Ireland as an exemplar in terms of knowledge transfer partnerships (KTPs); Queen's was a leading university in this respect.

An animated exchange of views followed as participants contributed to the discussion by offering comments or questioning the main speakers. Much of the dialogue focussed on the SME predominance amongst businesses in Northern Ireland. Several speakers observed that individuals developing successful but relatively small businesses were too often content to stay in a "comfort zone", continuing to offer an agreeable lifestyle while retaining personal control. A speaker from the SME sector reacted that once such a business became too prominent, it was regarded by bigger corporate players as potential "prey". On the other hand, an entrepreneur with experience of American as well as European business observed that developments in "Silicon Valley" and elsewhere pointed to the overall benefits of an "exit strategy". What often sustained an innovative cycle was the vital role of the innovating entrepreneur, who would often build up an innovative business in order to sell it, using the wealth accrued thereby to start up another innovative enterprise or act as a funding "angel". It was also argued that too often the skills of an SME enterprise in development and production far outran its skills in marketing. Economic progress for countries or enterprises depended as much, if not more, on the understanding and analysis of existing and potential markets as on research and development.

While many speakers acknowledged the important contribution made by universities to economic co-operation and development, there were also pleas not to underrate the importance of the Further Education sector. Knowledge generation was one thing; profitable exploitation of that knowledge another, and equally vital for economic success. From some of the academic participants there came suggestions that what might be described as "technical training" had been neglected in Northern Ireland, whereas the Regional Technical Colleges had played an important role in the Republic. It was argued, too, that what might be described as "applied research" had too long been undervalued within the British university system. Professor Gregson, however, expressed the hope that the revised Research Evaluation Framework (REF) to be used for resource allocation between universities would take account of the impact of research. There were strong appeals for more research students to spend a period in industry, perhaps returning to a university environment with a better feeling for, and knowledge of, business.

On the issue of collaboration, it was argued that, while important for the economy, this should be voluntary rather than forced. Enterprises will collaborate with businesses or other partners if, but only if, they feel this will generate revenue for them. Government can help to define markets in some important respects, and universities have a large contribution to make, but the wider process should be business-led.

As the discussion drew to its close, the principal speakers offered some brief concluding remarks. Dr Gray emphasized that government should play a challenge role but look to businesses themselves to come up with solutions. Mr. O'Driscoll stressed the need to use technology as well as science to drive innovation and secure the necessary

economic return. Professor Gregson welcomed the reminders of the importance of sales and marketing, accepted that the RAE had driven behaviour in universities and merited adjustment to encourage greater focus on the impact of research, and concluded with the assertion that "our people are the best resource".

Lord Selborne expressed the thanks of the Foundation to all who had organised, supported or participated in the event.

Sir Kenneth Bloomfield KCB

The presentations can be found on the Foundation website at www.foundation.org.uk.

Web Links:

Department for Enterprise, Trade and Investment, Northern Ireland
www.detini.gov.uk

Department for Employment and Learning, Northern Ireland
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The Foundation for Science and Technology
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