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Higher Education – Business and Community Interaction Survey 2012-13

Northern Ireland Analysis

May 2014

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Background

1. The annual Higher Education – Business and Community Interaction (HE-BCI) survey is carried out by the Higher Education Statistics Authority (HESA) in order to provide reliable and relevant information to support policy development, and to inform funding decisions related to the Knowledge Transfer[1] activities of UK Higher Education Institutions (HEIs).

2. The HE-BCI survey is the primary source of metrics used to determine Queen's University Belfast ("Queen's") and University of Ulster's ("Ulster") core funding allocations for their Knowledge Transfer activities through the Higher Education Innovation Fund, which is administered by the Department as part of its wider core grant.

3. The most recent UK HE-BCI survey dataset was published in March 2014 and provided information on the continuing development of the interaction between HEIs and the wider world of Business[2] and the community, covering **academic year 2012/13**. It also contains 2011/12 data for comparison purposes and some further trend information.

4. HE-BCI focuses exclusively on output data covering a range of activities, from the commercialisation of new knowledge, through the delivery of professional training, consultancy and services, to activities intended to have direct social benefits. It should be noted that this Northern Ireland HE-BCI report records the interactions between Northern Ireland HEIs and businesses located both within and outside the region – it is not possible to determine the share of these Northern Ireland HEI's interactions that are purely Northern Ireland based.

[1] Knowledge Transfer is used to describe HEIs activities in economic regeneration, regional engagement, relations with industry, intellectual property, the exploitation of research outcomes and other matters related to the HEIs Business and Community function.

[2] 'Business' in this context refers to private, public and third-sector parties of all sizes, with which HEIs interact in a broad range of ways.

Purpose

5. The purpose of this paper is to present a summary of the key findings of the latest HE-BCI survey data from a Northern Ireland perspective. The analysis focuses on Part B of the HE-BCI, that is, the financial and numeric outputs of HEIs Knowledge Transfer activities.[3]

6. A summary of key HE-BCI indicators (2002/03 – 2012/13) is presented in the Annex.

7. The UK HE-BCI report (published XX May 2014) provides further context and methodological detail. The latest UK HE-BCI report can be accessed by clicking Publications & reports - HEFCE

Key points

8. The HE-BCI report sets out the Northern Ireland position relative to the UK and should be read in context, where the Northern Ireland economy represents **2.1%** of UK GVA[4] and accounts for **2.0%** of Full Time Equivalent (FTE) academics in the UK.

9. **The latest HE-BCI data show an increase in the income NI HEIs received from business and community interaction in 2012/13 by around 6%**.

[3] Part A focuses on the strategic aims and levels of development within HEIs.
[4] GVA is a measure of economic activity, similar to but statistically distinct from GDP, that allows for regional analysis.

A: Income from Business and Community Interaction

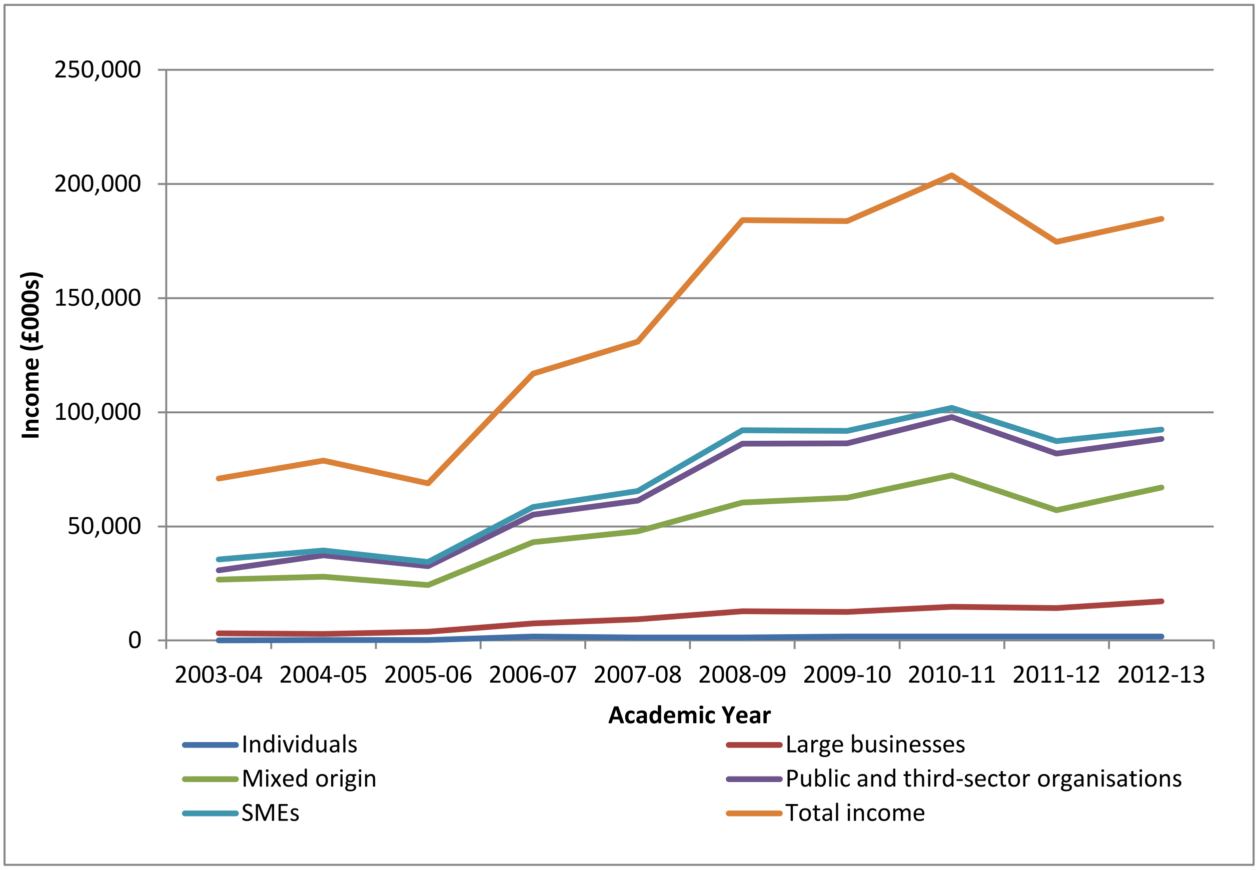
10. In 2012/13, **UK HEIs** received £3.6 billion (including Government funding) from business and community interaction, an increase of around 4% - in cash terms - from 2011/12.

11. The comparable figure for **NI HEIs** is £92 million, which represents a 6% increase from 2011/12 income levels. It should also be noted that HEI income from business and community interaction has more than doubled (+142%) since 2002/03 (see figure 2). NI HEI's income from business and community interaction of £92 million represents 2.6% of the UK total. This remains impressive in a context where Northern Ireland accounts for 2.1% of UK GVA and for 2.0% of the UK's FTE academics.

Income by partner

12. Spending by large businesses on interaction activities with NI HEIs increased by almost 25% from £12.4 million (in 2011/12) to £15.4 million (in 2012/13) while non-commercial partners in the public and third sectors, charities and social enterprises reduced their spending by -13.9% from £24.7 million to £21.3 million. There has also been a decrease of one-quarter (+25.3%) in total spending by small and medium-sized enterprises (SMEs) on engagement with NI HEIs (see figure 1).

Figure 1: NI HEI Total income by partner 2003/04 to 2012/13 (real terms)[5]



Research-based interactions and intellectual property

13. Income received by Northern Ireland HEIs through business and community interactions can be broken down further into a range of categories: collaborative research, contract research, consultancy contracts, facilities and equipment related services, education and continuing professional development, regeneration and intellectual property. These are considered below, separately.

[5] 'Mixed origin' refers to income from activities such as collaborative research, regeneration and sale of spin-off shares where – for reasons of practicality and/or administrative burden – the source of income has not been requested by HESA.

Collaborative Research Income

14. The HE-BCI survey defines collaborative research as R&D undertaken collaboratively between an HEI and an organisation/individual from business or community sectors. The income is primarily from public funds i.e. the UK Research Councils, Government Departments and the European Commission.

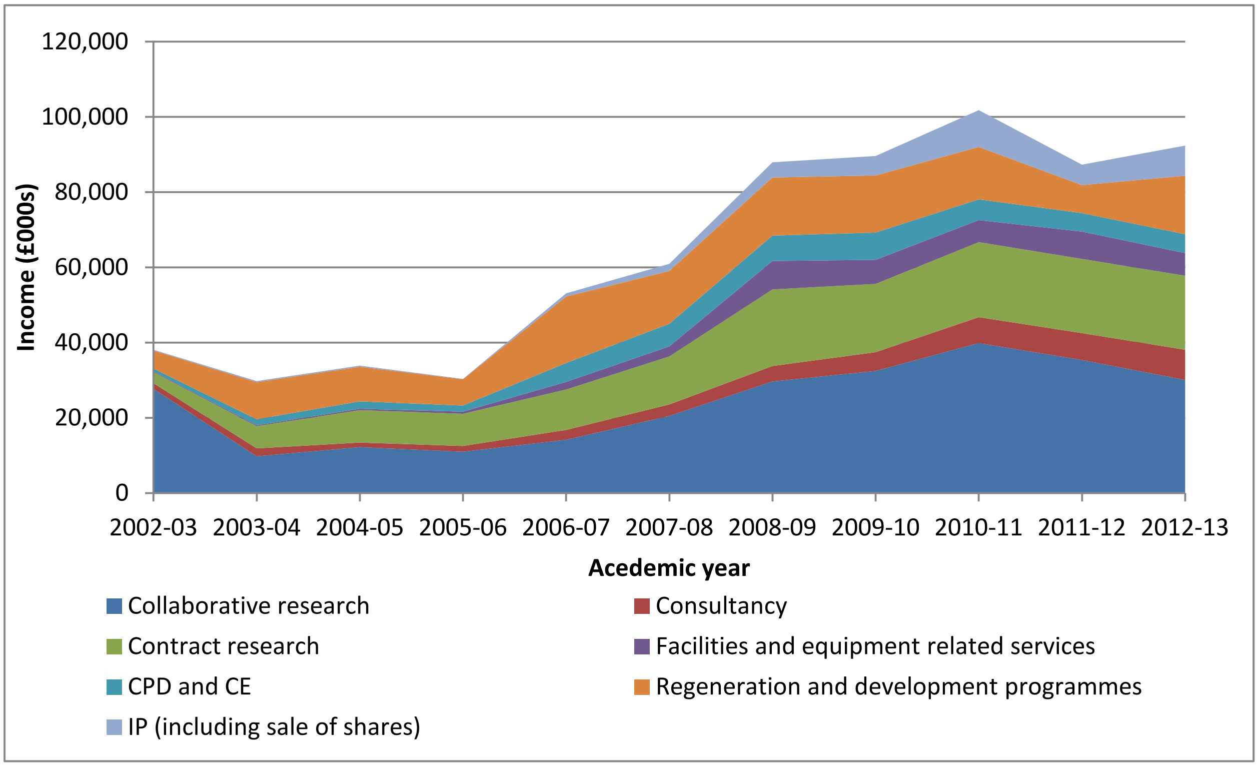
15. University income from collaborative research in Northern Ireland fell by 15% from £35.4 million in 2011/12 to £30.1 million in 2012/13 (see Figure 2). However, income from this source has increased by 9% since 2002/03. In relative terms, the performance of local HEIs in gaining income from collaborative research remains strong at £30.1 million in 2012/13, representing 3.2% of the UK total. Where the Northern Ireland economy represents **2.1%** of UK GVA and accounts for **2.0%** of FTE academics in the UK, this suggests local HEIs are outperforming their UK counterparts on this metric.

Contract Research Income

16. Contract research is that which a sponsor requires and, unlike Collaborative research which involves a broad range of research, is more specific – perhaps addressing a particular business need or opportunity, for example.

17. The HE-BCI survey shows that contract research income has remained fairly static at £19.7 million over the last academic year. Income from this source has however increased fivefold since 2002/03. Contract research income of £19.7 million in Northern Ireland represented 1.7% of the UK total in 2012/13. Where the Northern Ireland economy represents **2.1%** of UK GVA and accounts for **2.0%** of FTE academics in the UK, this suggests local HEIs have further scope to leverage contract income.

Figure 2: Selected HE-BCI income streams 2002/03 to 2012/13 (real terms)



Consultancy

18. Universities also engage in consultancy contracts, which are a more direct form of knowledge exchange between Higher Education and the economy, where existing knowledge is being innovatively exploited. Consultancy contracts are diverse: they range from helping charities, to innovative rapid prototyping, to advanced training in both scientific and art-based environments.

19. Income from consultancy contracts grew by 12% to £8 million in 2012/13, up from £7.1 million in 2011/12. Income from consultancy has increased fourfold since 2002/03. Income from consultancy of £8 million in Northern Ireland represented 2% of the UK total in 2012/13.

Facilities and Equipment Related Services

20. Facilities and equipment related services relates to the use by an external party of physical academic resources of the HEI.

21. Income from use of facilities and equipment declined over the last academic year by 17%. This income has however increased exponentially over the longer term, growing from £174k in 2002/03 to £6 million in 2012/13. Income from facilities and equipment related services of £6 million in Northern Ireland represented a significant 4.3% of the UK total in 2012/13. Where the Northern Ireland economy represents **2.1%** of UK GVA and accounts for **2.0%** of FTE academics in the UK, this suggests local HEIs are outperforming their UK counterparts on this metric.

Education and Continuing Professional Development

22. This includes revenue generated by Continuing Professional Development (CPD) courses, defined as a range of short and long training programmes for learners already in work who are undertaking the course for purposes of professional development, up skilling or workforce development.

23. Income from continuing professional development (CPD) and continuing education (CE) activity has increased by around 2% from £4.9 million in 2011/12 to £5 million in 2012/13. Furthermore, CPD income has grown strongly (+574%), in real terms, since 2002/03. Income from CPD and CE of £5 million in Northern Ireland represents a below average 0.8% of the UK total in 2012/13, suggesting that there is further scope to leverage CPD income in overall UK terms.

Regeneration

24. Regeneration funding is an important way for HEIs to invest intellectual assets in economic, physical and socially beneficial projects.

25. Income from regeneration programmes more than doubled, from £7.5 million in 2011/12 to £15.6 million in 2012/13. Over the longer term, income from this source has increased growing by 225% over the period 2002/03 to 2012/13. Due to this vast increase, income from regeneration of £15.6 million in Northern Ireland now represents a sizeable 9% of the UK total.

Intellectual property

26. Intellectual Property (IP) is a vital indicator for the value added by the HEI when interacting with a range of external partners. It is commonly in the form of licences granted to private companies, allowing them to exploit an invention protected by a patent.

27. Income from intellectual property (including sales of shares) increased by 48% between 2011/12 and 2012/13. Furthermore, income from this source has grown exponentially (+3812%) since 2002/03. Income from intellectual property (including sale of shares) of £8 million represented a substantial 9.3% of the UK total in 2012/13. Where the Northern Ireland economy represents **2.1%** of UK GVA and accounts for **2.0%** of FTE academics in the UK, this suggests local HEIs are outperforming their UK counterparts on this metric.

B: Commercialisation Activities

28. Commercialisation activities are an important part of a university's enterprise activities. Knowledge transfer through commercialisation would usually take the form of licensing of a patent or the formation of a spin-off company.

Spin-off Companies

29. Spin-offs are companies set up to exploit IP that has originated from within the HEI.

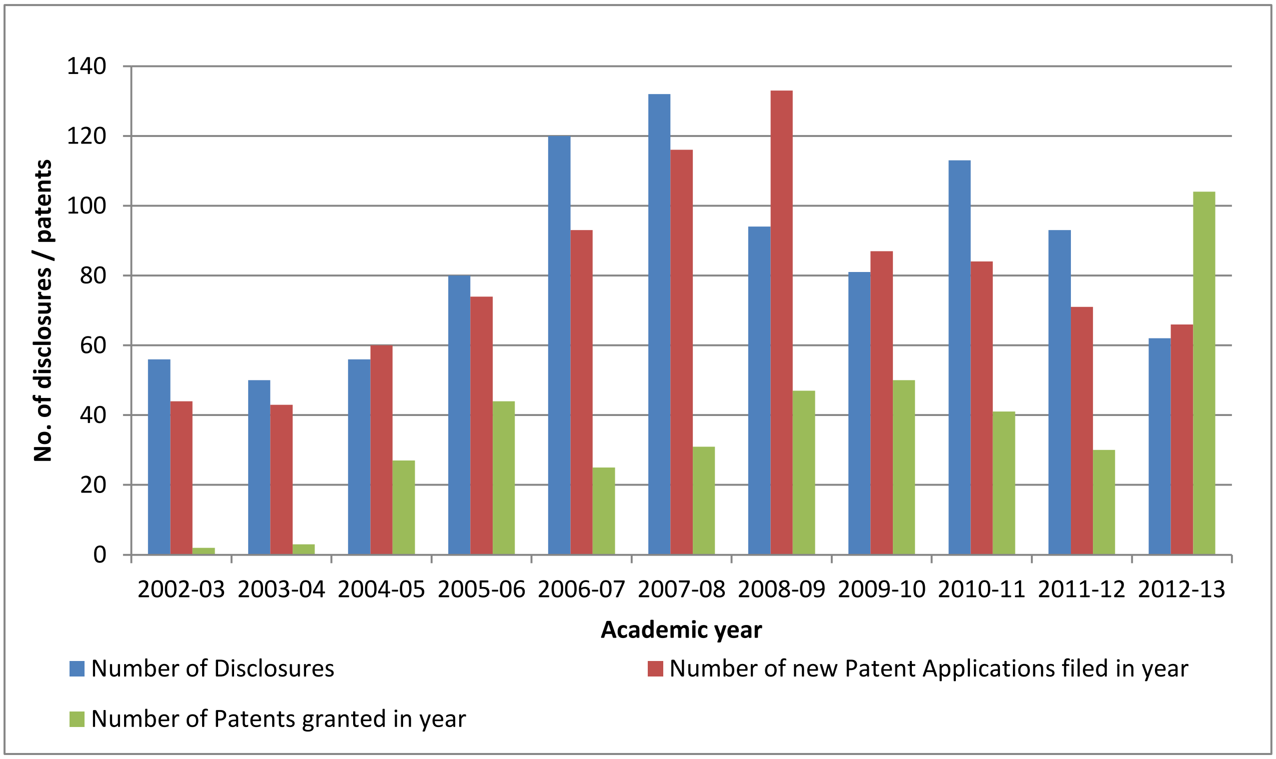
30. In 2012/13, there were 45 spin-off companies still active after 3 years in Northern Ireland – three fewer than the previous year. Over the longer term the number of spin-off companies still active after 3 years has increased by 45% between 2002/03 and 2012/13. The 45 spin-offs in Northern Ireland represented 4.6% of the UK total in 2012/13.

Disclosures

31. The number of research disclosures is also a good indicator of the level of research and innovation in Northern Ireland. A disclosure occurs when research-active staff become aware of potentially exploitable research and work with others (often knowledge specialist staff) to develop those ideas.

32. Disclosures have decreased by 33% to 62 in 2012/13, down from 93 in 2011/12. The number of new patent applications have decreased by 7% (71 to 66) over the last year while the number of patents granted have increased by 247% (30 to 104) over the same period. The cumulative patent portfolio of the NI HE sector increased by 28% to 551 in 2012/13 and represents 3.2% of the UK total in 2012/13 (see Figure 3).

Figure 3: Number of disclosures, patents filed on behalf of NI HEIs and patents granted



Social, community and cultural activities

33. HE-BCI also collects data on public events run by HEIs. These illustrate the wide-ranging civic, community and cultural contributions that HEIs make.

34. For example, just over 25 thousand people attended free public lectures organised by HEIs, representing a 20.5% increase from 2011/12. Nearly 63,000 people paid to attend performance events – such as music, film, dance and drama – and around 11,000 attended free performances. Exhibitions attracted around 10,000 visitors in 2012/13.

Summary

35. The latest HE-BCI Survey shows that the income received by Northern Ireland universities from business and community interaction increased from £87 million in 2011/12 to £92 million in 2012/13. This 6 per cent increase in income represents strong performance from Northern Ireland when compared to an overall increase across the UK of 4.4 per cent.

36. Northern Ireland universities are punching above their weight in terms of HE-BCI income, compared to their UK counterparts: Queen’s and Ulster’s income from business and community interaction represents 2.6% of the UK total. This is impressive considering the Northern Ireland economy currently represents 2.1% of UK GVA and accounts for 2.0% of FTE academics in the UK.

37. Table 1.1 presents a summary of trends in key HE-BCI indicators.

Table 1.1: Summary - Trends in Key HE-BCI Indicators

Indicator	Recent change (since 2011/12)	Long-term trend (since 2002/03)	NI as a percentage of the UK total[6]
Collaborative Research Income	-15%	9%	3.16%
Contract Research Income	0%	563%	1.69%
Consultancy	12%	430%	2.01%
Facilities & Equipment Related Services	-17%	3355%	4.25%
Education & CPD	2%	574%	0.77%
Regeneration	109%	225%	9.04%
Intellectual Property	48%	3812%	9.26%
Number of Spin-off Companies	-6%	45%	4.62%
Number of Disclosures	-33%	11%	1.44%
Patent Applications	-7%	50%	3.40%
Patents Granted	247%	5100%	10.89%

38. A summary of key HE-BCI indicators (2002/03 – 2012/13) is presented in the **Annex**.

[6] NI represents 2.1% of UK GVA
NI represents 2.0% of UK FTE Higher Education Academics.

Annex: Key Indicators from the HE-BCI Survey 2002/03 – 2012/13

Real-terms income from all sources (£000's)	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Collaborative research	27,711	9,789	12,218	11,003	14,182	20,515	29,682	32,483	39,892	35,398	30,082
Contract research	2,967	5,901	8,628	8,555	10,746	12,770	20,368	18,158	19,958	19,729	19,682
Consultancy	1,516	2,107	1,218	1,532	2,609	3,051	4,107	4,978	6,875	7,138	8,029
Facilities and equipment related services	174	229	352	558	2,030	2,662	7,564	6,396	5,853	7,265	6,012
CPD and CE	745	1,600	1,977	1,627	5,009	6,004	6,744	7,249	5,517	4,905	5,019
Regeneration and development programmes	4,792	9,870	9,206	6,972	17,673	14,058	15,447	15,182	13,930	7,457	15,554
IP (including sale of shares)	205	293	299	115	861	1,897	4,039	5,181	9,789	5,432	8,019
Total Income	**38,110**	**29,789**	**33,898**	**30,362**	**53,110**	**60,957**	**87,951**	**89,627**	**101,814**	**87,324**	**92,397**

Outputs from NI HEIs	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
Patent applications	44	43	60	74	93	116	133	87	84	71	66
Patents granted	2	3	27	44	25	31	47	50	41	30	104
Formal spin-offs established	6	7	2	1	2	10	7	2	8	6	8
Formal spin-offs still active after three years	31	37	36	38	45	48	47	48	49	48	45