

The Impact of Further Education Institutions on the Economy of Wales¹

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Introduction

During August 2005 the Regeneration Institute of Cardiff University together with the Welsh Economy Research Unit of Cardiff Business School were approached by the Welsh Development Agency² to undertake an analysis of the economic impact of the Further Education Institutions (FEIs) in Wales. The study was set in the context of a paucity of information on the economic role of the sector in the region.

The study comprised two main phases of activity. First was a quantitative analysis of the economic impact of the FEIs on the regional economy, whilst the second stage of the study examined the service provision of the FEIs, and a series of developmental issues. This second element of the study was extensively case-based.

FEIs in Wales provide education and training for around a quarter of a million learners each year. Over 70% of those learners are adults over the age of 19 studying on a part-time basis.

Further Education Institutions in Wales

In 2003-04 FEIs in Wales employed around 8,500 full time equivalents. This translates into an estimated 13,800 jobs, with the sector featuring a large number of part time opportunities in teaching and learning departments. FEIs contribute just over 11% of education employment in Wales, and a little over 1% of total Welsh employment. For reference, in employment terms, collectively the FEIs are around the same size as the motor vehicles components sector.

Pay levels vary tremendously by function in FEIs. Analysis of ELWa data suggests that, on average, earnings in the sector topped £28,000 per annum in 2003-04 which is well above the Welsh average of £19,000 (ELWa², Finance record, 2003-04). Importantly, the

spatial distribution of the FEIs means that the sector provides stable incomes in some of the most needy areas of the regional economy.

Total income of the FEIs in 2003-04 was £350.1m. The main component of income (£256.3m or 73%) represented core funding from the National Council for Education and Training in Wales (ELWa) grant. This category also includes Council and EU grants received. The total income figure of £350.1m can also be considered as the gross output of the FEIs in Wales, and therefore becomes an important input into the modelling of the indirect economic contribution of the FEIs in Wales.

Total spending of FEIs was £357.4m in 2003-04 and over two-thirds of this spending was on staff. In addition to this operational expenditure, FEIs in Wales spent an estimated £28m on capital items, including land, buildings and equipment.

Table 1 shows the distribution of learners by category, revealing the number of HE enrolments, and those involved in work-based learning. The colleges in Wales serve a wide geographical constituency with some students coming from other areas of the UK, as well as from overseas.

It is estimated that there were over 258,000 students attending courses in FE colleges in 2003-04. However, in

terms of students actually enrolled at 1st December this figure falls to 171,573. All told, in the 2003-04 academic year there were a total of nearly 441,000 achievers in further education. Just over one third of achievers qualified at NVQ 1 level or equivalent, with a further 31% at NVQ 2 level or equivalent. Around one in five of the total number of achievers qualified at NVQ level 3, and with less than 1% at NVQ Level 4.

Across the study schemes available in FEIs in Wales, information technology and business & management were the individual areas where the largest number of qualifications were gained.

The Regional Economic Impact of Further Education Institutions

A challenge in the economic assessment of the impacts of FEIs was to translate the operational (non-pay) spending from FEI spending categories into spend by Welsh industry groups, and to estimate the proportion of this spending which was on imported goods and services.

The results from this process are shown in Table 2. Out of the total of £96.6m of goods and services purchased by the FEIs in Wales, almost £63m are estimated as imports into the regional economy, leaving £34m as purchases of Welsh goods and services. Table 2 provides details of how the local purchases are distributed across

Table 1: Learners Enrolled at FEIs by Broad Category, 2003-04.

	All	Enrolled 1st Dec.
FE learners	246,753	164,011
HE learners	1,246	1,073
WBL learners	10,209	6,489
Total	258,208	171,573

Source: Lifelong Learning Record Wales, 2005, ELWa, provisional data.

Note: Many enrolments are for periods of less than one year.

¹ This project was funded by the Welsh Assembly Governments' Knowledge Exploitation Fund (ESF Innovation Fund).

² Since April 2006 the activities of ELWa and the Welsh Development Agency are undertaken by the Department of Enterprise, Innovation and Networks (DEIN) within the Welsh Assembly Government.

Table 2: Analysis of non pay expenditure by item, 2003-04.

Purchases of Welsh goods and services		£000s
1	Agriculture, Extraction, food and drink products	740
2	Textiles, clothing, paper and publishing	1,391
3	Chemicals, pharms, metal products, machinery, electronic components, furniture etc.	1,127
4	Energy and water	665
5	Construction	767
6	Sale and repair of vehicles, retail and wholesale	382
7	Hotels, catering, transport	1,583
8	Post, telecomms, insurance, renting and equipment	1,483
9	Legal and accounting services, other business services	8,969
10	Public admin, education and health	12,647
11	Recreation, culture and other services	1,833
12	Other expenses, including student bursaries	2,366
Sub total		33,952
Imports to Wales		62,669
Total non pay expenditure		96,621

Table 3: Direct and indirect output impacts of the FEIs in Wales, 2003-04.

		£m
Further education institutions' direct output		350
Supports indirect outputs in:		
1	Agric and manufacturing	27
2	Energy, construction, retail and wholesale	51
3	Hotels catering and transport	18
4	Private services	63
5	Public and other services	37
Total		547
Output Multiplier = £547m/£350m = 1.56		

Table 4: Direct and indirect employment impacts of the FEIs in Wales, 2003-04

Further education institutions' direct employment		8,500
Supports indirect employment in:		
1	Agric and manufacturing	283
2	Energy, construction, retail and wholesale	1,014
3	Hotels catering and transport	431
4	Private services	718
5	Public and other services	789
Total		11,736
Employment Multiplier = 11,736/8,500 = 1.38		

industries and this pattern of local spending is one influence on the level of indirect activity supported in the regional economy.

The next stage of the analysis combined the information in Table 2 with data on the directions of staff spending in the local economy such that the indirect

economic effects of the FEIs could be estimated.

As noted above, the gross output of FEIs in Wales was taken as £350.1m. The Input-Output framework was then used to estimate how much activity in the region is indirectly supported by the spending of the FEIs and their staff.

The direct £350.1m of FEI gross output is estimated to support a further £196.9m output in other sectors of the economy i.e. a total of £547m. In other words, each £1m of FEI output, supports a further £0.56m of output in the region (an output multiplier of 1.56).

Table 4 shows that FEIs in Wales employed 8,500 FTEs in 2003-04. However, the output indirectly generated by this spending supports an estimated further 3,236 FTE jobs. Put another way each FTE in the FEIs supports a further 0.38 of a job elsewhere in the regional economy (i.e. an employment multiplier of 1.38). Each £1m of FEI direct output then supports an estimated 33.5 FTE jobs in the regional economy.

In addition to the impact of the institutions themselves, the impact generated as a result of FEI student expenditures was examined. Only that spending which was considered to be truly additional to the economy was included. This comprised of the spending of 'other UK' (i.e. non Wales-domiciled) full-time students and overseas full-time and part-time students.

The additional student spending was an estimated £3.5m, which multiplied to a total spending impact of £5.8m, which is estimated to support almost 100 FTE jobs in Wales.

Conclusion from the quantitative analysis

In total, adding together the economic impact of the FEIs themselves, to that of FE students, the FEIs in Wales supported an estimated output of £552.8m, and just over 11,830 FTE jobs in 2003-04.

For comparison purposes the contribution of FEIs can be compared to that of higher education institutions (HEIs) in the Welsh economy. The most recent research on the economic impact of the HEI sector in Wales was completed by Kelly *et al.*, (2005). This research revealed that in 2002-03 the HEI sector directly and indirectly supported £1.01bn of output in the Welsh economy as a result of the purchasing activity of the institutions, their staff and students. This output supported a total of over 23,000 FTEs (including 13,545 FTEs directly in the sector itself). On this basis the FEI sector supports a little over half of the total output supported by the HEIs in Wales, but has similar indirect economic effects once allowance is made for the smaller scale of the sector i.e. FEI sector output in Wales is around half that of the HEI sector.

FE: The wider developmental role

The second part of the study assessed some of the wider range of transactions that the FEIs had with firms and institutions in Wales, noting that these are as significant as the financial transactions supported by the sector. This part of the research was supported

by a series of interviews with principals and senior managers in a sample of FEIs. A total of ten interviews were undertaken across eight FEIs. A number of linked consultations were also undertaken to gain information on the practical benefits for firms of closer collaboration with FE institutions. This informed the development of case studies.

Alongside all the other activities undertaken by FEIs, a central role that FEIs play within the Welsh economy is based on the provision of vocational skills and vocationally-based qualifications. However, whilst the provision of key skills remains the main focus of FEIs, the nature and quality of technology transfer is becoming paramount. Then FEIs have to be increasingly proactive with firms and institutions to fulfil a wider developmental role.

• Training and skills provision

The majority of interactions with business occurred as a result of the training provided by colleges. College principals and managers of commercial departments argued that there are several ways in which colleges may interact with the local business community including social networking, visiting employers, directly inviting company employers onto FEI premises, seconding staff to industry, and taking part in general networking events. The survey of selected FEIs in Wales suggested that interactions between FEIs and business were usually easier as firm size increased. Clearly, larger firms are more likely to have the resources available for off-the-job training, and have the wherewithal to cover absent staff.

This means that there is a challenge for FEIs in engaging with smaller as well as larger firms. The survey respondents recognised that a proactive attitude was a fundamental requirement for successful interaction with the all elements of the local business community

• Promoting technology transfer

The provision of skills by FE colleges has increasingly been accompanied by technology transfer and technical support to firms and institutions in the local economy. Here there were seen to be real opportunities for smaller firms with limited resources to benefit from interaction. Larger companies often have their own product development centres, specialised personnel and testing equipment. Smaller firms may not have such bespoke facilities and here the support from colleges becomes critical to their development.

Consequently, there are a growing number of cases of technical support to companies that go far beyond the provisions of skills and qualifications. Examples include the Food Technology Centre of Coleg Menai and the Farm Diversification Centre at Coleg Sir Gâr.

• Business incubation centres

There are a limited number of cases where FEIs have directly tried to influence firm formation through their own business incubation centres. Such centres can provide potential entrepreneurs and local businesses with services, business and management development, and networking capabilities. One example of a successful incubation centre is Ideapop based at Neath Port Talbot College.

Looking Forward

The second phase of the report highlighted a number of issues which have (and will) influence the quality and quantity of linkages that the FEIs have with firms and institutions in the region. Key issues raised by FEI principals and senior managers related to:

- Inadequate levels of resources to fund the wider FE mission
- Student preferences being very different from employer demands
- Cultural perception of the FE sector by employers
- Concerns over the post-merger landscape in Wales, and a resulting increase in uncertainty and anxiety.

The structure of the FE colleges and resource limits means that college-business interaction takes place in a context of inadequate information. Overcoming such information asymmetries is a two way process. First, it is necessary to develop a systematic analysis of likely future patterns of skills demand, and communicate these effectively to the FE colleges. Second, there is a need to fully inform firms on the scale and scope of the FE sector offer. Where firms are better informed, they are far more able to efficiently use local FE resources. A recurring theme from college principals and senior managers was a lack of resources to prosecute FE-business linkages.

A related enterprise issue is the reluctance of smaller firms to release key staff. Several experiences of work-based training and learning can be considered successful in terms of adhesion by firms. Nevertheless, these collaborative schemes still have to overcome several barriers and should be redesigned in the light of firms reluctance in 'freeing -up' scarce staff.

FEI senior managers considered funding as one of the most significant obstacles to the development of FE-business

linkages. They were critical not only about the inadequacy of general levels of funding for the FEIs, but also of the funding available to the business sector. They suggested that the mechanisms that drive funding within the FEIs need to be reviewed.

There is already very good work being undertaken in Wales at both the macro and micro level to address the issue of matching skills development with the underlying needs of the economy. This also relates to fforwm projects which have specifically worked with employers

to improve FEIs' responsiveness to training needs. However, following the conclusions in the 2005 Annual Report of Estyn, there remains a need for employers to clearly identify their skills needs and communicate them through to bodies such as the UK-wide sector skills councils.

Further Education in Wales should and must be viewed as a valuable partner by policymakers in economic development. The sector has an important role in developing the human capital base of the region and in breaking the low skills equilibrium that has hindered Welsh economic prospects during the 1980s and 1990s.

Reference

Kelly, U. *et al.* (2005), *Aspects of the impact of Welsh higher education institutions on the economy of Wales*, Final report to Universities UK, February.

Note

This article provides a summary of the research findings. A full report is available at www.wales.gsi.gov/KEF